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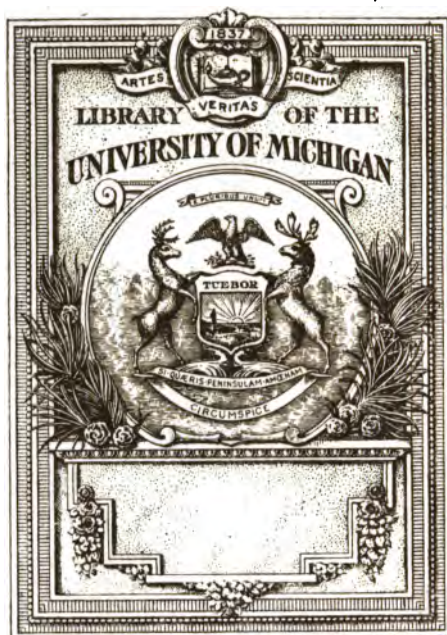
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THE GIFT OF
Wisconsin St. Bd. of
Health

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THIRTEENTH REPORT

OF



Wisconsin

The State Board of Health

OF

WISCONSIN.

1889—1890.



MADISON, WISCONSIN
DEMOCRAT PRINTING COMPANY, STATE PRINTERS
1891



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THIRTEENTH REPORT

UNIV. OF MICH.

OF

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The State Board of Health

OF

WISCONSIN.

1889—1890.



MADISON, WISCONSIN
DEMOCRAT PRINTING COMPANY, STATE PRINTERS
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GENERAL REPORT OF THE BOARD.

STATE OF WISCONSIN,
Office of the State Board of Health,
OCTOBER 31st, 1890.

HON. W. D. HOARD,
Governor of Wisconsin:

SIR:—In accordance with the provisions of law we have the honor to present the following thirteenth report of the State Board of Health, covering the biennial period ending September 30th, 1890.

We are glad to record the fact that during this period there have been no widespread epidemics of disease of any kind in the state with the exception of the form of Influenza, popularly known as La Grippe, which appeared in Wisconsin in December last, soon after its first appearance in this country, and rapidly spread throughout the entire commonwealth, a fairly conservative estimate of its prevalence being that over one-half of the population suffered from it noticeably, while it is probable that its depressing effects were felt by many who did not recognize it otherwise.

Reports received at the Secretary's office from a very large number of physicians and health officers refer to this epidemic as the cause directly or indirectly of 563 deaths. Wisconsin, however, probably did not suffer more heavily from La Grippe than many other states and probably not more than the average of the entire country. This peculiar and widespread epidemic has been the subject of extensive investigations which are still progressing, and which it is hoped may give us clearer ideas concerning its causation and the possible prevention of future epidemics than now exist. Such an epidemic is, however, a thing of very infrequent

General Report of the Board.

occurrence, and while worthy of all the study that can be given it, is of little importance when compared with many diseases that are constantly with us and which because of their constant presence attract far too little attention from the public.

Concerning some of these the theories and practices of the past have been revolutionized by the light of recent investigation and present knowledge. Consumption, the treatment of which is just now attracting the attention of the world, is a notable example of this change. The estimated destroyer of one quarter or one-fifth of all adult human life, its almost universal prevalence has hitherto been most commonly ascribed to heredity, even when to make this plausible, healthy parentage had to be ignored and the history of more remote ancestry appealed to. Such explanations do not now wholly satisfy. The demonstrated fact that it may be acquired by the introduction of a germ into the system has opened to view the possibility and practicability of the restriction and prevention of this disease by the destruction of this germ, outside of the human system, while we look with anxiety and hope that in the recently announced discovery of Dr. Koch, to whom the whole world is now doing homage, there may be a possibility of destroying these germs, at least in the early stages of their invasion of the tissues of the body. Such a discovery, if confirmed by experience, would rank as perhaps the greatest benefaction a man could confer upon his race, and the demonstration of its possibility would give us large hope that the germs of Diphtheria and Scarlet Fever, the two diseases now most fatal to child life, might also be destroyed. There is no possible estimate of what humanity would gain should this hope be realized. Concerning these diseases and others that have been prevalent in the state during the past two years, the Secretary's report presents some statistics that are of interest.

There have been during this time seven outbreaks of

General Report of the Board.

Small Pox, with a total of 23 cases, only one of which proved fatal, nearly all of the cases having been in a modified form. This disease has thus again been proved of easy control, and it has been of little consequence when compared with either Diphtheria or Scarlet Fever, the former of which has caused a total of 1,126 deaths, and the latter of which has caused a total of 375 deaths during the same period. Some of the reasons for the spread of these diseases are stated in the Secretary's report, to which we refer for further details. It seems certain to us, however, that but for the existence and enforcement of the laws designed for the restriction and prevention of disease which have been enacted and sustained by enlightened public sentiment, the loss of life from these diseases would have been many times greater than it has been.

It is with pleasure that we refer in this connection to a recent act of the National Congress, approved March 28, 1890, entitled, "An act to prevent the introduction of contagious diseases from one state to another, and for the punishment of certain offenses," the essential provisions of which are that whenever the President shall be satisfied that there is danger that "Cholera, Small Pox, Yellow Fever or Plague," these being the only diseases named, may spread from one state to another, such rules and regulations may be prepared and promulgated as will be necessary to prevent such spread of these diseases, violation of which rules is declared to be a misdemeanor punishable by fine or imprisonment. It is also made a misdemeanor punishable by fine or imprisonment for the rules thus provided for to be violated by any officer or agent or employe of any common carrier.

We may mention also in this connection a rule framed since our last report, by the Supervising Surgeon General of the Marine Hospital Service of the United States, to which the force of National law has been given by the approval of the Secretary of the Treasury, and the President,

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and which forbids the importation into this country of any person affected with Leprosy.

While this disease has shown no tendency to spread from the very limited number of cases that have ever been found in this state, but on the contrary has steadily diminished from the numbers originally brought to us, we are nevertheless fully of the opinion that no new cases ought to be permitted to come into the United States, and that those now here should be under the direct supervision of the health authorities.

RELATION OF THE STATE BOARD OF HEALTH TO LOCAL
BOARDS.

Organized chiefly with advisory powers and clothed with authority designed only for emergencies, this Board has steadily believed that one of its greatest opportunities for usefulness could be found in securing the organization of local Boards of Health, in instructing, directing and co-ordinating the work of such boards, and securing for them so far as possible, the intelligent interest and active co-operation of the people of their several communities. Great labor has been expended in these efforts, but we believe that much progress has been made and that never before has there been either so large a number of health workers in Wisconsin or such intelligent and faithful work done as during the past two years. The records of this Board show that there have been duly organized and reported to the Secretary during the present year, 1,046 local Boards of Health and that the aggregate membership of such Boards is 3,569.

In our last report we said "The Health Organization is the one that touches the people most nearly and most vitally in their homes and in their families. It is the organization above all others which should never be deprived of its place or powers from motives of so called economy." We believe this to be most emphatically true, and because we

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believe it to be for the truest interests of the people, it is our earnest desire to see such Boards amply sustained, both morally and pecuniarily. Each member of every Board of Health in the state should feel that he is placed in a position of special responsibility and of special influence, but while ample and in fact almost unlimited power is vested in the Boards they represent, they should remember that only by creating and securing an intelligent interest in their work can they hope to make it truly successful. Having such interest and co-operation there will be little need or opportunity for the exercise of any arbitrary authority.

In accordance with its usual custom and with its experience also of the usefulness of this custom, there are presented with this report some papers especially prepared therefor. Two of these are quite closely allied to each other, the one being by Dr. G. F. Witter, who gives the result of a sanitary examination of a large number of the public, and especially of the higher schools of the state, to which he adds some valuable suggestions deduced therefrom. A kindred paper is presented by Prof. W. D. Parker, as the result also of the sanitary examination of many schools which he has personally visited, this paper being also highly commendatory of the dry air system for the disposal of excreta as adapted to the better class of school buildings, his opinion being based on large personal observation and correspondence. Both of these papers are commended for careful study. A third paper has been prepared by Dr. S. B. Buckmaster, recently superintendent of the State Hospital for the Insane, it being an earnest plea both for the early treatment of the insane in hospitals, and also for perfect honesty with those who are to be taken to such institutions.

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LEGISLATION SUGGESTED.

In view of the probability of an invasion of the state by Asiatic Cholera, the legislatures of 1835, 1887 and 1889, each made provision for a contingent fund, available only in case of actual need apparent both to the Board and to the Governor. This fund has never been called upon and the whole amount has reverted to the state at the expiration of each biennial period. It would seem wise, however, that a similar fund should be again provided, available only under the same restrictions as before thus enabling this Board in the event of a common emergency to co-operate more effectually than it otherwise could with other states in which similar contingent appropriations are made, and we would therefore recommend that the sum of \$15,000 be again appropriated for the purposes named, subject to the control of the Governor.

We call attention also to the desirability, referred to more at length in the Secretary's report, of a law requiring burial permits, which shall be uniform in their provisions throughout the state. It is believed that only through the operation of such a law can the vital statistics of the state be satisfactorily or accurately ascertained, and we further believe that a comparison of the death rate and the causes of death in Wisconsin, with similar statistics in other states would demonstrate the superior healthfulness of our commonwealth, and thus attract attention to it as a desirable place of residence from a sanitary standpoint, bringing to it both honor and profit.

Finally we beg leave to refer to the fact that in the general law regulating the reports of boards and institutions, enacted by the last legislature, the number of reports allowed this Board were reduced from 8,000 to 3,000. We have already, in speaking of the organization of local Boards of Health, shown that the membership of such Boards alone, to each of whom we desire to send our reports, exceeds the

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total number now authorized to be printed, while as a matter of fact, the edition of 8,000 copies heretofore printed, has given us no more, nor even so many, as we can with benefit to the health interests of the state distribute among its citizens. We therefore recommend such legislation as will place at least 8,000 copies of our reports at our disposal for distribution.

Very Respectfully,

S. MARKS,

J. T. REEVE,

G. F. WITTER,

W. W. DANIELS,

S. C. JOHNSON,

B. O. REYNOLDS,

A. D. H. THRANE,

State Board of Health.

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SECRETARY'S REPORT.

To the State Board of Health:

GENTLEMEN:— I have the honor to present the following report, as your Secretary and executive officer, covering the biennial period ending September 30, 1890:

As prefatory thereto I desire to call your attention to the limitation placed by the last legislature upon the number of pages which the report of this Board may include, which is such that, with the papers already approved by you for publication, I am reminded at the outset that I can place before you only in the briefest outline the work of the Secretary's office.

Something of this work and of its effects may, however, be inferred from a study of the "Extracts from Correspondence," which I present herewith. These extracts have been made from letters and reports concerning public health work in the state, chiefly from the official reports of local Boards of Health. The object kept in mind in these selections has been to present, in the correspondent's own words, as nearly as possible, such selections as would most fairly represent either the work that has been done or which is shown to be needed, in as many parts of the state as possible, the space allowed any one being of necessity exceedingly limited, and except in very rare instances forbidding extracts from more than one correspondent in a locality. The volume of correspondence from which these selections have been made is a very large one.

I refer to this correspondence the more particularly because I believe that if the work of the state board is to be successful at all, it must be so chiefly by stimulating and co-ordinating the work of local boards, and that a record

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of what such boards are doing is one of the best evidences that can be presented of the influence of the State Board. I therefore solicit careful study of the work of local boards.

Historically there has been no change in the personnel of the officers of this Board since my last report, Dr. S. Marks having been twice re-elected to the office of President at the expiration of his term of office.

There has been but one change in the membership of the Board, Dr. A. D. H. Thrane, of Eau Claire, having succeeded Dr. K. Hoegh at the expiration of his term of office.

The present membership of the Board, with the dates of the expiration of their terms of office, is therefore as follows:

G. F. Witter, M. D., Grand Rapids; term of office expires 1891.

B. O. Reynolds, M. D., Lake Geneva; term of office expires 1892.

J. T. Reeve, M. D., Appleton; term of office expires 1893.

S. C. Jonhson, M. D., Hudson; term of office expires 1894.

S. Marks, M. D., Milwaukee; term of office expires 1895.

A. D. H. Thrane, M. D., Eau Claire; term of office expires 1896.

Prof. W. W. Daniells, Madison; term of office expires 1897.

On the retirement of Dr. Hoegh from the board, and as expressive of the appreciation of the services he rendered the state while a member of the Board, the following minute was adopted by it, Dr. Hoegh having at that time also removed from the state:

Resolved, That this board extends to Dr. Hoegh, on the occasion of his removal from Wisconsin, the assurance that he carries with him the esteem of those with whom he has been officially connected in sanitary work in the state, and their full and willing testimony to the faithfulness with which the duties that have devolved upon him have been performed.

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Resolved, That these resolutions be recorded in the minutes of the Board and that a copy thereof be transmitted to Dr. Hoegh.

It seems proper also in this connection to refer to the death of Prof. Thomas W. Chittenden, who, for several years, had been closely associated with the Secretary in the work of this office, and concerning whom the following record was ordered to be spread upon the minutes of the Board:

Prof. Chittenden was born in New York in 1833; was a close student in his youth and became an able teacher, writer, and chemist, in the city of his nativity. He came to Wisconsin in 1874, then in very poor health, was a teacher of advanced students, and superintendent of schools for a time at Grand Rapids. He became chief assistant in the office of your Secretary in 1879. Always in feeble health and constant suffering he was nevertheless able, by working in his own way, to accomplish very much, and the value of some of the work he did for this Board and for the benefit of the state can hardly be over estimated. He died January 15, 1890, of Congestion of the Lungs, his final sickness having been very brief though for several months prior thereto he had been unable to perform any labor.

Space forbids a further tribute to his worth than to say that by his death science has lost one of its most devoted followers, and public sanitation one of its closest students.

COMMITTEES.

The present standing committees of the Board are:

On Legislation: Drs. B. O. Reynolds, S. C. Johnson, and A. D. H. Thrane.

On Finance.—Prof. W. W. Daniells, Drs. G. F. Witter and B. O. Reynolds.

On Printing and Stationery.—Drs. J. T. Reeve, G. F. Witter and Prof. W. W. Daniells.

Other committees have been appointed from time to time

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for special investigations of local epidemics; for the study of special contagious diseases; for the examination of the sanitary condition of sundry public buildings; for an investigation of the water supply of the state; for the study of Leprosy; for an investigation of the effects of sundry occupations upon the health of those employed; for the study of Typhoid Fever; for an investigation of the sanitary condition of our public schools, and for other purposes.

The most of these committees have either discharged the special duties assigned them and reported to the Board, or have made partial reports and are continued in such work. In some instances the reports of these committees have shown that personal investigations by members of the Board have established the nature of local epidemics concerning which there was doubt or disagreement among local physicians. Two notable instances of this kind were, the investigation of an outbreak of Diphtheria at Darlington, which was made by Dr. Reynolds, and of an extensive epidemic at Evansville, which was made by Drs. Reynolds and Reeve. In this latter epidemic there had been, according to the best information obtainable, about 258 cases, to which 6 deaths had been directly or indirectly attributed. Diphtheria had been diagnosed in one family which had been quarantined, but outside of this family the epidemic was decided to be chiefly of the nature of a catarrhal, follicular and suppurative tonsillitis.

Of the reports of the special committees the one on School Sanitation has already been approved for publication in connection therewith.

TRANSPORTATION OF THE DEAD.

In my last report reference was made to efforts then in progress for the adoption of rules for the transportation of the dead, which should be practically uniform throughout the country. This subject has since that date been the subject of careful consideration, and rules, originally prepared

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by the National Association of General Baggage Agents, which were modified at the suggestion of this and other Boards of Health, have been adopted in many states. Essentially these same rules have been adopted by this Board, but under the advice and opinion of the Attorney General of the state, certain portions of these rules which were believed to relate solely to the convenience of transportation companies were omitted. These omitted portions of the rules as adopted by other boards are, however, appended as foot notes to the rules of this Board, which having been formally adopted and published in accordance with the provisions of Section 2 of Chapter 452 of the Laws of 1887, have now the force of law throughout the state. These rules are as follows:

RULES OF THE WISCONSIN STATE BOARD OF HEALTH FOR THE TRANSPORTATION OF THE DEAD IN PUBLIC CONVEYANCES.

RULE 1. The transportation of bodies of persons dead of Small Pox, Asiatic Cholera, Leprosy, Typhus Fever, or Yellow Fever, is absolutely forbidden.

RULE 2. The bodies of those who have died of Diphtheria, Anthrax, Scarlet Fever, Puerperal Fever, Typhoid Fever, Erysipelas, Measles and other contagious, infectious or communicable diseases must be wrapped in a sheet thoroughly saturated with a strong solution of bi-chloride of mercury, in the proportion of one ounce of bi-chloride of mercury to a gallon of water; and encased in an air-tight zinc, tin, copper or lead [lined] coffin, or in an air-tight [iron] casket, hermetically sealed, and all enclosed in a strong, tight wooden box; or the body must be prepared for shipment by being wrapped in a sheet and disinfected by a solution of bi-chloride of mercury as above, and placed in a strong coffin or casket and said coffin or casket encased in a hermetically sealed (soldered) zinc, copper or tin case and all enclosed in a strong outside wooden box of material not less than one inch and a half thick.

RULE 3. In cases of contagious, infectious or communicable diseases, the body must not be accompanied by articles which have been exposed to the infection of the disease. And in addition to permit from Board of Health or proper health authority, Station Agents will require an affidavit from the shipping undertaker, stating how body has been prepared and kind of coffin or casket used, which must be in conformity with Rule 2.

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RULE 4. The bodies of persons dead of diseases that are not contagious, infectious nor communicable, may be received for transportation to local points in same state, when encased in a sound coffin or metallic case, and enclosed in a strong wooden box, securely fastened so it may be safely handled. But when it is proposed to transport them out of the State to an inter-state point (unless the time required for transportation from the initial point to destination does not exceed eighteen hours) they must be encased in an air-tight zinc, tin, copper or lead lined coffin, or an air-tight iron casket, or a strong coffin or casket encased in a hermetically sealed (soldered) zinc, copper or tin case, and all enclosed in a strong outside wooden box of material not less than one inch thick. In all cases the outside box must be provided with four iron chest handles.

RULE 5. Every dead body must be accompanied by a transit permit from Board of Health or proper health authority, giving permission for the removal, and showing the name of deceased, age, place of death, cause of death (and if of a contagious or infectious nature), the point to which it is to be shipped, medical attendant and name of undertaker.

RULE 6. It is intended that no dead body shall be moved which may be the means of spreading disease, therefore all disinterred bodies, dead from any disease or cause, will be treated as infectious and dangerous to the public health, and will not be accepted for transportation unless said removal has been approved by the State Board of Health, and the consent of the health authority of the locality to which the corpse is consigned, has first been obtained, and the disinterred remains enclosed in a hermetically sealed (soldered) zinc, tin or copper-lined coffin or box, or box encased in hermetically sealed (soldered) zinc, tin or copper cases.

NOTE. The above rules are identical with the Rules of the National Association of General Baggage Agents, except that the rules of that Association have the following additional requirements:

As a part of Rule 5, "Every dead body must be accompanied by a person in charge, who must be provided with a ticket and also present a full first-class ticket marked "Corpse."

And also the following additional rules, numbered 6 and 7. (Rule 8 of the Association being identical with Rule 6 of the Board of Health as printed above.

RULE 6. The transit permits must be made with a stub to be retained by the person issuing it, the original permit must accompany the body to destination, and two coupons; the first coupon to be detached by station agent at initial point and sent to the General Baggage Agent, and the second coupon, by the last Train Baggage man. The stub, permit and coupons must be numbered, so the one will refer to the other, and on per-

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mit will be a space for undertaker's affidavit, to be used in cases of contagious or infectious diseases, as required by Rules 2 and 3.

RULE 7. The box containing corpse must be plainly marked with paster, showing name of deceased, place of death, cause of death, the point to which it is to be shipped, number of transit permit issued in connection, and name of person in charge of the remains. There must also be blank spaces at bottom of paster for Station Agent at initial point to fill in the form and number of passage ticket, where from, where to, and route to destination of such ticket.

Copies of the above rules with proper blanks for meeting their requirements have been furnished to every local Board of Health in the state, and they have also been sent to all railway and express companies for their guidance.

The form of transit permits, coupons, etc., adopted, are uniform with those of other states, and are as follows, the rules referred to being printed on the reverse side of said permits:

STATE OF WISCONSIN.

Health Department.

TRANSPORTATION OF CORPSES.

No.....

TRANSIT PERMIT.

In the..... of..... County of.....
 (City or Township.)
 State of..... on the..... day of..... 189.. Permission is hereby
 given to remove the remains of..... aged..... years....
 months.... days, who died at.....
 (City, or Township and County.)
 on the day of..... 189.. The cause of death having been.....
 which is a..... disease, and a Transit
 (Contagious or Non-Contagious.)
 Permit being asked for burial at..... in the
 State of.....

Name of Undertaker.	}	Signed by.....
.....		
Name of Medical Attendant.		(Local Board of Health.)
.....	}	
.....		(P. O. Address.)

State of..... date..... 189..
 I hereby Certify, That the body of..... named in this Transit

Secretary's Report.

Permit has been prepared by me for transportation in accordance with the rules of the State Board of Health by having been

(Signed).....Undertaker.

If the Disease was Infectious or Contagious, Undertaker must make following affidavit.

State of }
 County of } On this.....day of.....A. D. 189..
 before me, a.....in and for the County and State aforesaid,
 personally appeared to me known and made oath
 and says that all the statements contained in the foregoing are true.

Sworn and subscribed to before me this.....
 day of.....189..

[Seal.]

COUPON No. 2. TO TRANSIT PERMIT. No.....		COUPON No. 1. TO TRANSIT PERMIT. No.....	
	Who died at		Who died at
			
	Taken at		Taken at
By.....	By.....		

TRANSIT PERMIT. This stub to be retained by person issuing permit. (See form above.)	No.....	Issued to.....
	Name of Deceased..... (If a minor, give parents' name.)	
		
	Interment at.....	
	Date of Death.....189.. Age...years...months...	
	Place of Death.....	
	Cause of Death.....	
	Certified by..... M. D.	

Secretary's Report.

Following is the form of the Disinterment Permit adopted for use under the requirement of Rule 6:

STATE OF WISCONSIN.

Health Department.

TRANSPORTATION OF CORPSES.

DISINTERMENT PERMIT.

APPLICATION HAVING BEEN MADE for the disinterment and removal of the body of who died of on the..... day of, 18., from the place where the body now lies buried in, County of, Wis., to in the state of

THIS IS TO CERTIFY THAT such disinterment and removal has been approved by the State Board of Health subject to the consent of the Health Authorities of the locality to which it is desired to remove said body, and subject also to all the rules and regulations of the Board relative to the transportation of the dead by which Health Authorities and Transportation Companies are to be governed.

Given at the office of the Secretary of the State Board of Health at Appleton, Wis., this day of, 189..

..... M. D., Secretary.

SLAUGHTER HOUSES.

Among the complaints of offensive nuisances which exist in the various localities, few come more frequently than those relating to improperly located or offensively kept slaughter houses.

As this seems to be a matter which it is very difficult for localities to control, and upon which Boards of Health do not seem clearly to understand their rights or their duties, the following correspondence with the Attorney General is presented as likely to be of public interest.

APPLETON, WIS., May 31st, 1889.

HON. C. E. ESTABROOK,

Attorney General, Madison, Wis.,

DEAR SIR:—We have been requested to lay the following case before you for your official opinion as to what legal proceedings may be taken by the aggrieved parties both to secure a prompt abatement of an existing nuisance and to insure them against a recurrence thereof in future.

Secretary's Report.

We do this the more willingly as the case is a typical one in many points, other instances having occurred in which the advice of this Board has been sought under circumstances essentially the same as those herein described.

The statement here made comes from Mr. O. P. Clough, chairman of the town board of Darien, Walworth county, and for two years or more the chairman of the local Board of Health. As far as possible we give his own words:

"There exists within the corporate limits of Delavan, a few rods from the eastern line of Darien, a slaughter house built across the stream called Turtle creek, which flows from the town of Delavan into and through Darien. Below this slaughter house and along the stream on both sides are grazing lands on which the farmers of Darien keep cattle of various kinds, depending on the creek for the water supply for their stock.

"The town Board of Darien having received complaint from the farmers referred to, that the waters of the stream were being contaminated, and being petitioned to investigate the same, has found on examination that the water of the creek is polluted by the presence of dead animals, offal, etc., thrown or deposited in said stream by those in charge of the slaughter house above mentioned, the water above the location of the said building being pure, a grist mill and dam being located on the stream just above it. The Health Board of Darien has notified the Village Board of Delavan repeatedly of the condition of things, the Delavan Board answering evasively, and doing nothing, so that the people of Darien are convinced that there is no hope that the Village Board of Delavan will take any effective action for the abatement of the nuisance, and they desire to know what legal proceedings may be taken on their part to compel the village of Delavan, its representatives, or the proprietors of the said slaughter house, to abate the existing nuisance, and to secure the inhabitants of Darien against a repetition thereof."

It is represented that the public health in Darien, and also the health of the stock dependent upon this stream for water, demand that some summary action be taken.

Of course the statement as above presented is an *ex parte* one, but the question therein raised is representative and may be thus stated: What is the legal remedy or what is the proper proceeding to be instituted by the authorities of one town as against those of another when a nuisance created by the residents of the latter threatens the health of the inhabitants of the former to such an extent as to require prompt and practically summary action to secure the needed relief?

A question closely analogous recently laid before the Board from several

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localities may be thus stated: When a slaughter house or other offensive form of business is established in a town, village or city and is so conducted as to become a public nuisance, the owner of which being also the official whose duty it is made by the statute to suppress nuisances of the kind, what remedy have the residents of such town or other municipality, and what is the proper mode of procedure?

We shall be glad to have you indicate the legal remedies in such cases so that we may quote your reply when the advice of this Board is asked, as has repeatedly been the case, in instances analogous to those above cited.

Very respectfully,

J. T. REEVE,
Secretary.

The following was received in reply to to above communication:

MADISON, Wis., June 11, 1889.

DR. J. T. REEVE,

Secretary of the State Board of Health,

Appleton, Wisconsin.

DEAR SIR — Yours of May 31st duly received. I have given the subject suggested by your inquiries some attention, and will try and answer the same in as satisfactory a way as possible.

Section 1418, of the Revised Statutes, provides a penalty for keeping a slaughter house upon the bank of a river, or depositing in such river or stream any dead animal, or part thereof where the stream flows through any city or village.

This section has been construed by the supreme court, and there held to apply only where the stream flowed through a village or city below where the slaughter house was located or the offal deposited. And you will notice by the last clause of this section, that it makes any officer who shall knowingly permit a slaughter house to be so used or maintained subject to punishment.

In addition to the section of the statute referred to, there can be no doubt that one who, by depositing or throwing any substance into a running stream of water and thereby contaminating it to such a degree as to render it dangerous to the public health, is guilty of the commission of a public nuisance and is liable to indictment therefor. There are a number of authorities to this effect, including some in our own state.

If the fouling of the stream is sufficient in degree to render it a public nuisance, it would be indictable as I have said; and also any party who owned land adjacent to the stream below, and who would hence have a

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right to the use of the water free from such contamination, might maintain an action for the injury to his private interests which he sustained by the party who committed the nuisance; and in case where the contamination was not sufficient to make it a public nuisance but still renders it unfit for the domestic use of stock to a certain extent, the lower proprietor may maintain a private action for damages.

Very truly yours,

L. K. LUSE,

Asst. Atty. Gen.

PREVALENCE OF SPECIAL DISEASES.

Tables have been prepared showing the prevalence of each of the more common forms of preventable diseases, by counties, but will be omitted in this place for want of space, the following summary being substituted:

Concerning the first of the list, to-wit: Small Pox, it is believed that every case has been reported, its history traced, and the measures for preventing the spread thereof fully known.

Concerning the more generally prevalent diseases, Scarlet Fever and Diphtheria, there is good reason to believe that many cases have not been reported as the law provides, and that in a few places the failure to do so has been known and condoned by the local health authorities. It is with much regret that I make this statement, but there is evidence that I cannot doubt of such dereliction of duty. The question has been asked by those who justly complain that the lives of their own little ones are imperiled by the negligence of those in authority, "what can be done" in such cases, and the answer is to be found in the provision of law found in Section 5 of Chapter 167, Laws of 1887, which provides that *any citizen* may make complaint before any magistrate, of the dereliction of duty on the part either of physicians or health officers, whereupon it becomes the duty of the district attorney to prosecute. The duty of requiring reports from physicians, however, devolves *officially* upon health officers, and where clear evi-

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dence is furnished that physicians have attended cases of any of the diseases specified by law as contagious and dangerous to the public health without reporting the same the penalties of the law may and should be enforced. I think I may profitably quote here the remarks of his honor Judge E. W. Keyes, of Madison, upon the trial of a case before him in which a physician had failed to report a case of Scarlet Fever.

"This," said the judge, "is a prosecution under section 8, chapter 187, laws of 1883, entitled 'an act for the better protection of public health.' It is the first prosecution under this law ever brought in this court.

"Section 3 provides that whenever any physician, residing and practicing in this state shall know that any person whom he shall be called upon to visit, is sick with Small Pox, Scarlet Fever, Diphtheria, Asiatic Cholera, or other dangerous contagious disease, he shall immediately give notice thereof to the Board of Health, etc., and any physician who shall refuse or neglect to give such notice for a period of forty-eight hours shall, upon conviction thereof, be liable to penalty.

"Under these provisions," continued the judge, "it seem clear to me that the intention of the law is to prevent the spread of contagious diseases by confining the same within their original limits," and thereby prevent general contagion. All will admit that, to the general public, it is a very important law and that it should be, in the interests of every community, most rigidly enforced. It is made the duty of the practicing physician who shall know such case to report the same immediately, and, upon neglect to do so after forty-eight hours, the penalty attaches. As I interpret this section the obligation of the physician commences immediately upon his knowledge of the contagious character of the disease, and it becomes his duty at once to report the same to the Board of Health, to be followed within the time limited by a more formal notification. And no physician can excuse himself in the performance of this duty, by the press of professional business. He should see to it that there is no delay in the matter. The penalty of the law follows from his neglect of this duty. The statute is one imposing a penalty for the non-performance of a duty on the part of practicing physicians which it specifically prescribes.

"It may be that practicing physicians are laboring under a misapprehension as to the provisions of this law, and as to their duty and obligations in the premises, but a careful consideration of the same makes their course appear to me to be perfectly clear. And no regard for the family or friends of patients should prevent them from making a prompt report to

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the Board of Health of all contagious diseases, because the responsibility entailed upon them by the provisions of the statute are great and they cannot escape therefrom, for promptness in this respect may prevent the spread of disease.

"It seems to me that the evidence in this case, beyond all doubt, brings home to the knowledge of the defendant that this was a case of Scarlet Fever, and that such it appeared on his first visit; and that, therefore, he was guilty of a neglect of duty in not making a report of the same to the Board of Health as required by law, thus affording the superintendent of the board in the discharge of his duty, an opportunity for its full and complete performance. There was an attempt to comply with the provisions of the law, but it failed, as the defendant was first called to this case on Wednesday, the 30th of January, and no report of the same was made until Saturday, the 2d of February. The defendant is an old physician, who has enjoyed a large practice in his profession, and may have been so engrossed in his business that his duty in the premises escaped his attention. As I said, all this is no excuse; the law must be enforced. And, therefore, under the evidence which seems to me is so clear and undoubted it is my duty to impose a fine upon the defendant which, under circumstances of this being the first case in this court, will be the lowest under the law — \$5 and costs."

SMALL POX.

In December, 1888, after my annual report for that year had been made, one mild case of this disease was reported in the town of Alto, Fond du Lac county, believed to have been brought there by a stranger whose residence was unknown. The case was in charge of Dr. Gee, of Brandon, and was so well managed that it did not spread to any other case, all other members of the patient's family being protected by vaccination.

During the year 1889 this disease appeared in five distinct localities with a total of 21 cases and 1 death, a majority of the cases having been in a modified form. The first of these cases was at Lake Geneva in the person of a traveling man who contracted the disease at some unknown place. The patient was thoroughly isolated, all exposed persons were at once vaccinated, and the outbreak was confined to this one case.

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The disease next appeared in the city of Milwaukee in the person of a Russian emigrant who had just arrived in this country. The man was found wandering around the streets in the night, and being unable to give any account of himself he was first taken to a police station from whence, under a mistaken diagnosis of his disease, he was transferred to the county hospital at Wauwatosa. From this place, the nature of his disease becoming apparent, he was again transferred to the pest house in the city of Milwaukee, but not until after, through exposure at the hospital, four others had contracted the disease, in one of whom it proved fatal. The conflict of authority which occurred in this case between the health commissioner of the city and the county physician led to unnecessary exposure both of the patient and others and was thus most unfortunate.

Small Pox next appeared at Menomonie, in Dunn county, where it was brought by a laborer from Indiana, who from the history appears to have been exposed to the disease on an emigrant train. In this place there were five cases, all of whom recovered. At Castle Rock, in Grant county, there were five cases, with no deaths. At Lincoln, in Kewaunee county, there were also five cases with no deaths.

During the year 1890 to this date but a single case has been reported, which occurred in the town of Ridgville, in Monroe county, in January, and resulted in recovery.

It will be seen that in none of these outbreaks was there any considerable spread of the disease, vigilant restrictive and preventive measures having been adopted in every case. It is manifest, however, from the statements of a very large number of health officers, that vaccination is being so largely neglected that a grave danger is before the state should Small Pox obtain any foothold in it, and the question of making vaccination a pre-requisite to admission to any public school is worthy the careful attention

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of our legislators. Inquiries made of all health officers in the state as to the proportion of children who are being vaccinated before arriving at such age, and also as to what regulations exist in their respective communities relative to the admission of unvaccinated children into school, elicits the information that in not more than five or six localities are there any requirements on this subject, and that except in a few communities but a very small proportion of children are being vaccinated, it being in many places entirely neglected.

DIPHTHERIA.

As usual this disease has been the cause of the greatest mortality of any of the contagious diseases of childhood.

During the year from September 30th, 1888, to September 30th, 1889, the whole number of outbreaks of this disease reported to this office was 245, with an aggregate of 2,051 cases and of 468 deaths, a mortality of 22.6 per cent.

During the period from September 30th, 1889, to September 30th, 1890, the whole number of outbreaks reported was 236, with an aggregate of 1,449 cases and of 350 deaths, a mortality of 24.8 per cent., or taking the biennial period an aggregate of 3,500 cases and of 818 deaths, a mortality of 23.7 per cent. To this must be added 96 deaths which occurred from this disease in the city of Milwaukee in the year ending September 30th, 1889, and 212 deaths which occurred in the same city in the year ending September 30th, 1890, making the total number of deaths reported in the state during the biennial period 1,126.

It is very evident to any one who will carefully study these facts that there has been a wholly unnecessary sacrifice of child life from this disease, and that through a more faithful application of the known means for its restriction many lives now lost annually, might be saved.

The difficulties in the work of prevention of this disease are real ones and of many kinds, but they are not insur-

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mountable, and if the public had the wholesome fear of Diphtheria that they have of Small Pox, they would not be so regarded. One of the most common and at the same time most difficult things we have to contend with, is the fact that there are a few who are recognized under our laws as physicians, and many outside of the profession, who either deny entirely the contagious character of this disease or who believe that it is contagious only when in a malignant form. Cases have been reported to this office not infrequently, where under such belief, encouraged by physicians, no precautions have been taken to isolate those who were sick, or to prevent the public funerals of those who had died. It is to be very greatly regretted that such funerals which have often been a fruitful source of the spread of this disease, are ever permitted to occur. They would not be if the people properly understood the danger from them.

The following report from a correspondent is interesting and instructive: "A public funeral was held in this place after the death of a boy from Diphtheria, with little boys for bearers, and a choir of children. The wife of the preacher took her Sunday School class into the house to see their dead companion; one of those took the disease and died of it; one of the bearers also took the disease and spread it to his family. The result of this outbreak was fourteen cases of the disease, with four resulting deaths, and one additional case of Paralysis." The doctor adds frankly, "I sinned in this matter; I ought to have done then as I have done since—said to the parties peremptorily that such funerals should not be held," but he believed that he had not then the backing of public opinion, and though he "argued and protested and swore" the funeral took place as stated, another physician having declared the death to be from a non-contagious disease.

Another correspondent, a physician who is also a health officer, speaks of a case in which "every arrangement was

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made for a public funeral following death from Diphtheria, six little girls having been selected as pall bearers." The doctor succeeded in preventing the carrying out of this program only by the issue of positive orders, which had to be enforced by the aid of a marshal. In commenting on this case he expresses very forcibly and truly his conviction that the most efficient way to control contagious and epidemic diseases is to educate the people in regard to them, "so that those who are trying to protect the people therefrom may no longer be abused for so doing." He adds something of his experience in another state where he passed through such severe epidemics of this disease that the people dreaded it as they would dread Cholera or Small Pox, burying the dead therefrom at night and privately.

In contrast to this case in which the doctor simply performed his duty, though he did it under unpleasant circumstances and at the loss, not permanently it is hoped, of some patronage, I present the following history of a shameful case of ignorant, if not willful, neglect, and a disregard both of duty and of the lives of others. "A young man about 17 years of age, while away from home and at work in an adjoining town, became sick and was visited by a physician who pronounced the disease Diphtheria. The doctor advised that the boy be sent to his home, which contained several children, and the advice was followed, but he did not go with him, or apparently in any way notify the family of the danger of contracting the disease, or even visit the case again until the third day. The boy died, but before doing so communicated Diphtheria to others of the family, in which there were four additional cases and two additional deaths."

In addition to the ways already alluded to in which this disease has been spread, there have been reports to this office some cases in which the evidence was very strong that domestic animals, such as cats, have not only suffered

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from a disease closely resembling Diphtheria, but that they had apparently communicated this disease to children who had fondled them, thus tending to confirm the belief now quite general that the disease may be spread in this way.

SCARLET FEVER.

The percentage of mortality from this disease has been much lighter than that from Diphtheria, but very much of what has been said of Diphtheria is applicable also to Scarlet Fever, which has ranked next to Diphtheria in frequency as a destroyer of child life. During the year from September 30, 1888, to September 30, 1889, there were reported to this office, from outside the city of Milwaukee, 1,930 cases of this disease, with 160 deaths as having resulted therefrom, a mortality rate of 8 per cent. During the corresponding months of the last year, to-wit, from September 30, 1889, to September 30, 1890, the number of cases of the disease for the same territory was 978 with 85 deaths, a mortality rate of 8.7 per cent. To this there must be added of deaths from this disease in the city of Milwaukee, for the first named period 107, and for the last 23, making the total number of reported deaths in the state for the biennial period to be 375.

The difficulty in controlling Scarlet Fever is perhaps even greater than in Diphtheria, several cases have been reported to this office since my last report, which are illustrative both of the treacherous nature of the disease and of the persistent and enduring character of its contagious principle.

It is believed that many cases of this disease are never recognized unless by their sequelae and so are never reported; of course any such case may communicate the disease and thus become the starting point of a new epidemic. A correspondent writes: "In one family eight had Scarlet Fever. The early stage was so light that all, six children and two adults, went out of doors daily, even dur-

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ing the eruptive stage, and no physician was called until the end of the third week; every one was then found to be suffering from one of the frequent sequelae of neglected cases, to-wit, a peculiar form of Inflammation of the Kidneys with swelling of the face and extremities, scanty and albuminous urine, etc. As a result of this disease, two had convulsions, one was blind for several days, one had discharges from the ears, one died, and of those who lived, some will always lead a crippled life."

Another correspondent reports, in a striking way, his apparently well founded reason for believing that the poison of this disease has remained in an old building for several years. Scarlet Fever had prevailed in the building six years previously, in severe form, and the building was not afterwards sufficiently disinfected. For a part of the intervening time it had been unoccupied, and when occupied it was for brief periods, during which it appears that no repairs or alterations were made in it. On being re-occupied, shortly before this report, extensive alterations and repairs were made, and the correspondent writes: "I am satisfied that the tearing out and general overhauling that was done while the house was under repairs released the scarletinal poison, that had been lying there dormant for these six years, with the result of causing an outbreak of this disease from which we are now suffering." Almost simultaneously with this report there appeared in a sanitary journal an account of an outbreak of Scarlet Fever in England, in which the origin of the disease was believed to have been the disinterment of the bodies of some persons who had died of the disease about thirty years before.

TYPHOID FEVER.

Though the laws of the state have not hitherto required reports of this disease it has been the subject of a good deal of correspondence, and it has been reported to this office in very considerable numbers, 199 deaths having been re-

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ported in the year ending September 30, 1889, the mortality of the disease, as nearly as could be ascertained, having been at the rate of 12.9 per cent. During the year ending September 30, 1890, the number of deaths reported from this disease had been 133, and the rate of mortality figured from the reports has been 13 per cent., making a total of deaths for the biennial period of 332, with an average mortality of about 13 per cent., the whole number of cases, as nearly as can be ascertained from reports, having been 2,221.

It is undoubtedly true that the reported cases and deaths are both below the number that actually occurred, and that this disease which is largely preventable by the exercise of proper precautions, especially as to the purity of the water supply, is one of the greatest drains upon the lives of young manhood and womanhood from which the state suffers. The measures by which it may be restricted are worthy the most careful study and painstaking effort, and the prevalence of any considerable number of cases of this disease in any community can hardly be believed possible where proper sanitary precautions have been observed—the proper disinfection of the excreta of patients, and the careful supervision of the water supply, being of the first importance.

MEASLES.

The law does not require report of this disease, and it may be presumed that such reports as we have received are therefore far below the actual number that existed, but for the first year of the biennial period about 6,000 cases were reported, the number of deaths being given as 97, a mortality of 1.4 per cent. For the second year of the biennial period the number of cases reported was 4,226, and the number of deaths 62, a mortality also of 1.4 per cent., or for the biennial period a total of 10,226 cases, with 158 resulting deaths and an average mortality of 1.4 per cent.

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WHOOPING COUGH.

The report of this disease is also voluntary. About 4,700 cases were reported in the first year of the biennial period, with 77 resulting deaths, a mortality of 1.6 per cent. For the second year of the biennial period the number of cases reported was about 3,800 cases, with 67 resulting deaths, a mortality of 1.9 per cent., or for the biennial period a total of 8,500 cases and 144 deaths, an average mortality of about 1.7 per cent.

These reports are instructive chiefly, perhaps, as showing that these diseases are fatal in a greater per-centage of cases than is generally supposed, and they thus emphasize the need for care in their prevention and restriction. As a rule a very large proportion of both of these diseases receive only domestic care and treatment, and being seldom regarded as dangerous, proper attention is rarely paid to the danger that really exists that they may leave the system permanently debilitated and an easy prey to other diseases. Thus many serious lung troubles are developed for want of care during and subsequent to an outbreak of either of these diseases, especially Measles, and this is more especially true of cases that occur after the period of young childhood.

OTHER DISEASES.

Of the prevalence of other diseases of a Diarrhoeal character, of Erysipelas, of Puerperal Fever, etc., etc., many interesting reports have been made to this office, frequently with request for suggestions as to the origin or possible restriction or prevention, to which such answers have been given as seemed applicable, generally with suggestions as to the improvement of local sanitary conditions. A number of these reports have been read to you from time to time in the meetings of the Board, and having received your suggestions concerning them it does not seem necessary further to refer to them in this connection.

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LOCAL BOARDS OF HEALTH.

The work of the State Board of Health is of necessity very largely done with and through the local Boards. The work entrusted to these Boards is of the utmost importance to their several communities, and great responsibility rests upon every member of such Board, but especially upon their health officers to whom are entrusted the executive powers. The correspondence of this office with local Boards is a very extensive one, involving an immense amount and variety of detail, and I am glad to be able to express my conviction that they are working generally with a better and more intelligent appreciation of their duties and of their responsibilities than heretofore. There are, of course, many exceptions, and many Boards that have simply a perfunctory existence. There are others who rise to a proper conception of their duties only in the presence of an epidemic, which intelligent efforts on their part might have wholly averted or arrested in its very incipency. There are still others that have zeal without discretion, and who instead of winning popular support sometimes antagonize it, and in this there is a lesson that only discreet men should be selected for such positions, but I believe that on the whole the Public Health work in this state is not only being done by a large number of men, but is generally on a better and more intelligent basis than ever before.

The total number of local Boards of Health now existing in the state, so far as the records of the Secretary's office show is 1,046, with a total membership of 3,569 persons, a considerable increase in membership over any previous year. It is probable that there are a few organized Boards that have failed to report their organization to this office. It seems to be especially difficult to make it understood in some communities that an *annual* report of organization is required, and so it has happened several times that a report of the re-election of the Health Board of previous years

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has been regarded as not required; with this explanation I present the following:

Detailed list of the cities, towns and villages from which reports have not been received for the year 1890. A similar list for the year 1889 has been presented to you but is here omitted:

Adams County—Dell Prairie, Quincy.

Ashland County—Hurley village.

Barron County—Dallas, Turtle Lake.

Brown County—Eaton, Glenmore, West Depere.

Buffalo County—Dover.

Chippewa County—Big Bend, Bloomer, Arthur; Flambeau, Lawrence.

Clark County—Grant, Lewis, Mentor, Thorp.

Columbia County—Arlington, Lewiston, Marcellon.

Dane County—Blooming Grove, Mazomanie village, Oregon village, Roxbury, Stoughton.

Dodge County—Emmet, Westford.

Door County—Brussels, Union.

Eau Claire County—Fairchild village.

Fond du Lac County—Brandon, Rosendale.

Forest County—Cashman.

Grant County—Boscobel city, Hazel Green village, Platteville, Watterstown.

Green County—Brooklyn, Jefferson, Monroe, Sylvester, Washington.

Green Lake County—Berlin, Markesan.

Iowa County—Avoca village, Highland, Moscow, Wyoming.

Jackson County—Millston, Lake Mills village.

Juneau County—Germantown, Marion.

Kenosha County—Bristol.

Kewaunee County—Kewaunee, Red River.

La Crosse County—Burns.

La Fayette County—Fayette, Wiota.

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Manitowoc County—Franklin, Liberty, Newton, Two Creeks.

Marathon County—Eaton, Marathon, Marathon village, Mosinee, Pike Lake.

Marinette County—Wausaukee.

Monroe County—Wilton.

Outagamie County—Ellington.

Pepin County—Waubeck.

Pierce County—Ellsworth, Ellsworth village.

Portage County—Alban.

Price County—Brannon, Fifield.

Richland County—Lone Rock village.

St. Croix County—Hudson, Summerset.

Sauk County—Fairfield, Spring Green village.

Shawano County—Richmond, Waukeechon.

Sheboygan County—Plymouth.

Taylor County—Deer Creek.

Trempealeau County—Lincoln.

Vernon County—Stark, De Sotoville.

Waupaca County—Lind, Waupaca.

Waushara County—Hancock, Warren.

Winnebago County—Nekimi, Omro, Oshkosh T. S., Wolf River.

Wood County—Pittsville city, Saratoga, Seneca, Sigel, Vesper.

Total number of towns not reported in 1890, 102.

Included in the above list is the smaller one, now numbering only 18 townships, from which the organization of a Board of Health has never been reported to this office. A similar list was presented to you in 1888, then containing the names of 39 places from which up to that time reports had never been received.

The most of these delinquent towns are very small and some of them are yet very new and imperfectly organized in any respect. It is presumed that very few if any of them are wilfully refusing to obey the law which requires

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organization, the most of them at least doing so ignorantly or through failure to understand either the requirements or the purposes of the law.

COMPENSATION OF HEALTH OFFICERS.

I have several times referred to the fact that in some of our more important places the compensation of health officers was entirely inadequate to the amount of service expected of and actually rendered by them. The following figures may be of interest in this connection:

Two hundred and forty-eight towns and cities report that their health officers receive no remuneration for their services, and these places range in population from 150 to 4,500, the average population being about 1,300.

One hundred and five towns and cities, the average of whose population is about 1,000, report that their health officers receive a compensation of two dollars per day for each day they are employed by order of the board. Fifty-two localities, with an average population of about 1,000, report that their health officers have no fixed compensation, their bills for official services being usually allowed and paid. Sixty-six localities of somewhat larger size, averaging about 1,700 in population, report that their health officers are paid "regular fees" for their services.

A few localities report that their health officers also serve as City Physician and receive for their services in this double capacity salaries ranging from \$300 to \$600 per annum, this latter sum being the largest paid by any locality outside of Milwaukee.

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The following embraces all the places known to us in which the salary is \$50 or more.

Place.	Salary.	* Population.	Place.	Salary.	Population.
La Crosse.....	\$200 00	30,000	Watertown.....	\$100 00	10,000
Madison.....	600 00	16,000	Wauwatosa.....	100 00	6,000
Ashland.....	400 00	18,000	Two Rivers.....	100 00	4,000
Menomonie.....	348 00	5,400	Baraboo.....	80 00	5,000
Appleton.....	300 00	12,000	Merrill.....	75 00	8,000
Stevens Point.....	250 00	9,000	Peshtigo.....	75 00	1,500
Vaughn T. S.....	214 00	6,000	Shawano.....	60 00	1,600
Oshkosh.....	200 00	28,000	Alma.....	50 00	1,600
Antigo.....	200 00	4,000	Bashaw.....	60 00	3,000
Neenah.....	200 00	5,000	Boscobel.....	50 00	1,500
Washburn.....	200 00	4,500	Commonwealth.....	50 00	800
Bayfield.....	150 00	1,500	Depere.....	50 00	1,000
Racine.....	150 00	23,000	Florence.....	50 00	2,000
Rice Lake.....	150 00	3,000	Green Bay.....	50 00	9,000
Beaver Dam.....	100 00	4,500	Kennosha.....	50 00	9,000
Beloit.....	100 00	7,000	Kilbourn City.....	50 00	1,300
Hudson.....	100 00	4,000	Marinette.....	50 00	8,000
Oconto.....	100 00	5,000	Michicott.....	50 00	1,500
Sheboygan.....	100 00	20,000	New London.....	50 00	5,500

* NOTE. The populations as given above are the estimates made by the Health Officers of the respective localities.

LA GRIPPE.

Inquiries relative to the prevalence of the peculiar epidemic of Influenza known as "La Grippe" develop the following facts. Every county in the state excepting Douglas and Forest, which have not been heard from, report the prevalence of this epidemic during the winter of 1889-90, the per-cent. of the population affected ranging from 10 per-cent., the lowest which any county reports, up to 80 per-cent., the highest in any county, Burnett being the lowest and Washburn the highest; the general aver-

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age throughout the state being about 55 per-cent. The counties of Bayfield, Chippewa, Juneau and Oneida report an average of about 70 per-cent., while Lincoln and Outagamie report an average of about 20 per-cent., and Marathon, Polk and St. Croix report about 30 per-cent.

The number of deaths attributed to this disease directly are very few, but these together with those attributed to its complications make the very considerable number of 563. Some, while they report no deaths, say that quite a number are still suffering from its effects in throat, lung, and catarrhal troubles.

The counties from which the largest number of deaths were reported are Columbia, 33; Dodge, 27; Sheboygan, 24; Chippewa, 24; Milwaukee, Jefferson, Portage, Racine and Walworth report 22 each; while ten counties report no deaths directly due to its effects.

This is a very conservative estimate, as in all cases where two rates were given, as "from one-half to two-thirds," or "30 to 40 per-cent.," the lowest was taken, and in such general estimates as "nearly all had it," the entry was made at about one-half or two-thirds.

MEDICAL PRACTICE.

Applications continue to be received at the office of the Board, from men in various parts of the Union, for information as to the requirements for entering on the practice of medicine in this state. A few of these are evidently from educated men, but the great majority are from men who are illiterate and incapable of using the English language correctly. A large proportion of these men have not sufficient medical education to meet the requirements of neighboring states, from which they are practically driven by the requirements there made that they shall pass an examination in medicine, or present evidence that they are properly qualified to practice.

Secretary's Report.

BURIAL PERMITS.

Closely allied to the question of the transportation of the dead is that of requiring burial permits. It is, I think, the general opinion of those who have given attention to the matter, in which I most certainly join, that in no other way can we secure an accurate knowledge either of the causes or the number of deaths than by requiring some form of burial permit. It is the belief and to some extent the boast of the people of Wisconsin that this is one of the healthiest states in the Union, and that its death rate is among the lowest. From the best comparisons I can make I believe this opinion to be well founded, but when we are asked for the statistical proof of this opinion we are forced to admit that it cannot be shown.

It does not need argument to prove that it would be to the pecuniary advantage of the state to have its superior healthfulness conclusively proven, and to have attention drawn to it as a health resort more prominently than it has been.

I believe nothing would conduce more directly to this than an accurate comparison of its death rate with that of other states, and it is furthermore a duty of every community, at least of every community of considerable size, to have an accurate knowledge of its vital statistics, hence I suggest the propriety of urging upon the legislature the enactment of a general law forbidding the interment or disposal of the dead body of any person without the permit of some suitable authority, as a prerequisite to which, the name, age and cause of death, with such other facts as might seem advisable, should be stated. Of course there would be difficulties in securing observance of such a law in the newer and more sparsely settled parts of the state, but there certainly ought to be no difficulty in the cases of incorporated cities or villages, and if the operation of the law were confined, at first at least, to such localities, much would be gained of the life history of the state.

Secretary's Report.

LIBRARY.

The following accessions to the library have been received since the publication of the twelfth annual report.

By Gift.

Seventh and Eighth Annual Reports, State Board of Health, New Hampshire; from I. A. Watson, M. D., Secretary.

Tenth, and 8 copies of the Eleventh Reports, State Board of Health, California; from G. G. Tyrrell, M. D., Secretary.

Annual Reports, State Board of Health, Alabama, 1887 and 1888; from T. A. Means, M. D., Secretary.

Thirteenth Annual Report, Australian Health Society; from J. S. Burrows, Esq., Secretary.

Ninth and Tenth Annual Reports, State Board of Health, South Carolina; from H. D. Frazer, M. D., Secretary.

Biennial Report, State Board of Health, West Virginia, 1887-1888; from N. D. Baker, M. D., Secretary.

Twelfth Annual Report, State Board of Health, Minnesota, 1886-1888; from C. N. Hewett, M. D., Secretary.

Twelfth and Thirteenth Annual Reports, State Board of Health, New Jersey; from E. M. Hunt, M. D., Secretary.

Eleventh and Twelfth Annual Reports, State Boards of Health, Connecticut, 8 copies; from C. A. Lindsey, M. D., Secretary.

Third and Fourth Annual Reports, State Board of Health, Pennsylvania, 8 copies; from Benjamin Lee, M. D., Secretary.

Seventeenth and Eighteenth Annual Reports, Local Government Board, London, England; from J. Buchanan, M. D., Medical Health Officer.

Ninth Annual Report, State Board of Health, New York, 1889, 8 copies; from Lewis Balch, M. D., Secretary.

Twentieth and Twenty-first Annual Reports, State Board of Health, Massachusetts; from S. W. Abbott, M. D., Secretary.

Secretary's Report.

Seventh and Eighth Annual Reports, Provincial Board of Health, Ontario, Canada; from P. H. Bryce, M. D., Secretary.

Annual Reports of the Supervising Surgeon-General of the Marine Hospital Service of the United States for 1888 and 1889; from J. B. Hamilton, M. D., Supervising Surgeon-General.

Fourth Annual Report, State Board of Health, Ohio; from C. O. Probst, M. D., Secretary.

Ninth and Tenth Annual Reports, State Board of Health, Illinois, 8 copies each; from J. H. Rauch, M. D., Secretary.

Sixteenth Annual Report, State Board of Health, Michigan; from H. B. Baker, M. D., Secretary.

Eleventh and Twelfth Annual Reports, State Board of Health, Rhode Island; from C. H. Fisher, M. D., Secretary.

Fifth Annual Report, State Board of Health, Kansas, 3 copies; from J. W. Redden, M. D., Secretary.

Eighth Annual Report, State Board of Health, Indiana; from C. N. Metcalf, M. D., Secretary.

Annual Report, State Board of Health, Missouri, 1888; from George Herman, M. D., Secretary.

Biennial Report, State Board of Health, Louisiana, 1888-1889; from L. F. Salomon, M. D., Secretary.

Fourth and Fifth Annual Reports, State Board of Health, Maine; from A. G. Young, M. D., Secretary.

Transactions of the State Medical Society of New Hampshire for 1888, with proceedings of the 99th anniversary; from G. P. Conn, M. D., Secretary.

Transactions of the State Medical Society of Maine for 1888, 1889 and 1890; from C. D. Smith, M. D., Secretary.

Transactions of the State Medical Society of Pennsylvania for 1888, 1889 and 1890; from W. B. Atkinson, M. D., Secretary.

Transactions of the State Medical Association of New York for 1888; from A. L. Carroll, M. D., Secretary.

Secretary's Report.

Transactions of the Florida State Medical Association of 1889 and 1890; from A. W. Knight, M. D., Secretary.

Transactions of the State Medical Association of South Carolina for 1888 and 1889; from J. L. Dawson, Jr., M. D., Secretary.

Proceedings of the Detroit Medical and Library Association for 1888; from F. W. Mann, M. D., Secretary.

Proceedings of the State Medical Society of Michigan for 1889 and 1890; from G. Duffield, M. D., Secretary.

Transactions of the Minnesota State Medical Society for 1889; from C. B. Witherle, M. D., Secretary.

Transactions of the Louisiana State Medical Society for 1889; from P. B. McCutcheon, M. D., Secretary.

Transactions of the Medical and Chirurgical Faculty of Maryland for 1889 and 1890; from G. Lane Taneyhill, M. D., Secretary.

Transactions of the Medical Association of Alabama for 1889 and 1890; from T. A. Means, M. D., Secretary.

Transactions of the State Medical Society of Illinois for 1889; from D. W. Graham, M. D., Secretary.

Transactions of the State Medical Society of California for 1889 and 1890; from W. W. Kerr, M. D., Secretary.

Transactions of the State Medical Society of New York for 1889 and 1890; from C. H. Porter, M. D., Secretary.

Transactions of the New Jersey State Medical Society for 1889; from W. Elmer, Jr., M. D., Corresponding Secretary.

Communications of the Massachusetts Medical Society for 1889, from C. W. Swain, M. D., Corresponding Secretary.

Proceedings of the Connecticut Medical Society for 1889; from N. E. Wordin, M. D., Secretary.

Annual Report of the Commissioner of Education, 1886 and 1887; from N. H. Dawson, Commissioner.

Report on Medical Education, Medical Colleges and the Regulation of the Practice of Medicine in the United States

Secretary's Report.

and Canada, 1765-1889; 8 copies; from J. H. Rauch, M. D., Secretary of the S. B. of H. of Illinois.

Third and Fourth Annual Reports of the State Veterinarian; from V. T. Atkinson, V. S.

Journal of the Elisha Mitchel Scientific Society from 1887 to 1890; from Prof. F. A. Venable.

Forty-sixth, Forty-seventh and Forty-eighth Annual Registration Reports of Massachusetts; from S. W. Abbott, M. D., Secretary.

Public Health Laws of New Hampshire; Report of Committee on Pollution of Water Supplies, Am. Pub. Health Assoc., 1888; from I. A. Watson, M. D., Secretary S. B. of H. of N. H.

Compendium of Public Health Laws of Pennsylvania; 2 copies; from Benj. Lee, M. D., Secretary of the S. B. of H. of Pa.

Eleventh, Twelfth and Thirteenth Annual Reports of the Board of Health of St. Louis, Mo.; from S. F. Dudley, M. D., Commissioner.

First and Second Biennial Reports of the Dairy Commission of Minnesota; from W. J. Ives, Commissioner.

Report of the Surgeon General of the U. S. Navy, 1888; from W. J. Moore, M. D., Surgeon Gen.

Presidential Address Am. Public Health Assoc., 1888; from C. A. Hewitt, M. D., President.

First and Third Annual Reports of the Dairy Commission of Ohio for 1886 and 1888; from F. A. Derthick, Commissioner.

Dairy Laws of Michigan; from H. B. Baker, M. D., Secy. of the S. B. of H. of Mich.

Second Annual Report of the Dairy Commission of Iowa, with Dairy Laws; from H. D. Sherman, Commissioner.

Annual Reports of the Dairy Commissioner of New York for 1887, 1888 and 1889, with Dairy Laws; from J. K. Brown, Commissioner.

Secretary's Report.

Prevention of Yellow Fever in Florida, by W. C. Van Bibber; from the author.

Sixth Biennial Report of the Kansas Historical Society, 1888; from F. G. Adams, Secretary.

Report of the Health Department of Chicago, Illinois, for 1887; from O. C. De Wolf, M. D., Health Commissioner.

Annual Report of the Health Commissioner of St. Paul, Minn., for 1888 and 1889; from H. T. Hoyt, M. D. Commissioner.

Report of the Sanitary Inspector, Tenement House District, Boston, Mass.; from Prof. D. Porter.

Report of the Forestry Commissioners of Michigan for 1888; from Hon. H. J. Reynolds, Secretary.

Report of the St. Louis, Mo., Public Library, 1887-88; from F. M. Cunden, Librarian.

Thirty-sixth Annual Report of the Penn. Training School for Feeble Minded Children; from I. N. Kerlin, M. D., Superintendent.

Laws of New Jersey Relating to Food and Drink; from W. K. Newton, Dairy Commissioner.

Fifteenth Annual Report of the Cincinnati Sanitarium for 1888, and "Expert Testimony and Medical Experts"; from O. Everts, M. D., author and Superintendent.

Annual Report of the Dairy Commission of New Jersey for 1888; from W. K. Newton, Commissioner.

Presidential Address, Sanitary Convention, Lewisburg, Penn., May 17th, 1888; from Benj. Lee, M. D., of Pa.

Fourth Annual Report, Board of Health, Portland, Me.; from S. C. Burgess, Secretary.

Annual Report, Health Officer, Madison, Wis., for 1889; from F. H. Bodenius, M. D., Health Officer.

Report of the Board of Health, Reading, Penn., for 1888; from J. R. Laing, Health Commissioner.

Biennial Report, State Board of Charities and Reform, Wis., 1887-1888; from A. O. Wright, Secretary.

Report on Water Supplies of Illinois, and Pollution of

Secretary's Report.

its Streams, 7 copies; from J. H. Rauch, M. D., Secretary of the S. B. of H. of Ills.

Fourth Annual Report, Board of Health, Newport, R. I.; from F. H. Rankin, M. D., Secretary.

Twenty-Eighth Annual Report, Cincinnati Hospital; from P. A. Marchand, Librarian.

Bulletins of the Agricultural Experiment Station, University of Wis.; from Prof. W. A. Henry.

Report on Forestry, 1878-1879, Report on Forrestry, 1884, Report of Department of Agriculture, 1886-'87, and '88, Report of Division of Forrestry, 1887, Report on the Relation of Railroads to Forrest Supplies, 1887, Report on Forrest Conditions, Rocky Mountains; from Hon. J. M. Rusk, Secretary of Agriculture.

Sixteenth Annual Report, Board of Health, City of New Haven, Conn.; from S. W. Williston, M. D., Health Officer.

Laws of Wisconsin, with Index of Session Laws since 1878, Vol. 1, 1889; from Hon. E. G. Timme, Secretary of State.

Unsanitary Condition of Country Homes, by L. M. Hall, M. D.; from the author.

Proceedings of the Sixth Annual Meeting of the Ohio State Sanitary Association; from Harvey Reed, M. D.

Water and its Impurities from Air and Earth, by C. W. Moore, M. D.; from the author.

Report of the Medical Officer, York, England, on Diphtheria; from S. W. North, Medical Officer.

Registration Report of New Hampshire, for 1887 and 1888; from I. A. Watson, M. D., Secretary of the State Board of Health of N. H.

Report on an Epidemic of Small Pox at Sheffield, England, 1887-1888; from S. W. North, Medical Health Officer, York, England.

Registration Report of Providence, R. I., 1888; from C. V. Chapin, M. D., Registrar.

Secretary's Report.

U. S. Census, Volumes 18, 19, 20, 21, 22; from Hon. P. Sawyer.

Investigation of Cattle Disease in Nebraska, 1886-1889, by F. S. Billings, D. V.; from the author.

Rural Sanitation, by O. W. Peck, M. D.; from the author.

Report of the Board of Pharmacy, 1889; from E. B. Heimstreet, Secretary.

Forty-first Annual Report of the Trustees of the Astor Library, for 1889; from Henry Drisler, Secretary.

Public Health and Public Wealth, by R. A. Williams, M. D.; from the author.

Annual Report, Board of Health, Mobile, Alabama, for 1889; from T. S. Scales, M. D., H. O.

Charter and Ordinances of the City of La Crosse, Wis., with the Rules of the Common Council; from W. E. Polleys, City Clerk.

The Use of Skiascopy in the Determination of Refractory Errors, by H. V. Wurdemann, M. D.; from the author.

Second Annual Report, Board of Health, City of Mansfield, Ohio, 1889; from Harvey Reed, M. D., Health Officer.

Twenty-Ninth Annual Report of Cincinnati Hospital, 1889; from P. A. Marchand, Custodian.

Water Analysis, from 1879 to 1889; from C. N. Hewett, M. D., Secy. S. B. of H., of Minn.

Manual of American Water-Works; from The Engineering News Co.

Proceedings of the Sanitary Conventions at Hastings, Otsego, Ludington and Tecumseh, Mich., in 1888 and 1889; from H. B. Baker, M. D., Secretary State Board of Health of Mich.

Seventh Annual Report, Board of Trustees of the Public Museum of Milwaukee, for 1889; from W. M. Wheeler, Secretary.

Sanitary Report, City of Montreal, Canada, 1888; from Louis La Berge, Health Officer.

Secretary's Report.

Bulletins of the Public Health, Reprint from 1881; from J. B. Hamilton, M. D., Supv. Surg.-Gen., U. S. Marine Hospital Service.

Operative Treatment of Pleuritic Effusions, and Empyema, by K. Heogh, M. D.; from the author.

Amended Charter of the City of Marinette, Wis., with Ordinances; from J. J. Sherman, M. D.

Fourth and Fifth Reports of the Bureau of Animal Industry, 1887 and 1888; from Hon. J. M. Rusk, Secretary of Agriculture.

Sixteenth Annual Report of the Cincinnati Sanitarium, 1889; from O. Evers, M. D.

Treatment of the Insane as Related to Science and General Condition of Humanity Historically Considered, by O. Vers, Supt. of the Cincinnati Sanitarium; from the author.

Volume of Circulars of the New Jersey State Board of Health; from E. M. Hunt, M. D., Secretary S. B. of Health.

Proceedings of the Seventh Annual Meeting of the Ohio Sanitary Association; from Harvey Reed, M. D.

Sixth Report of the State Board of Dental Examiners of Wisconsin; from Dr. Edgar Palmer, Secretary.

Report of the Health Officer of the Port of New York, to the State Commissioners of Quarantine; from Wm. M. Smith, Health Officer.

Treatise on Early Operation in Perityphlitis, by E. W. Lee, M. D., and J. B. Murphy, M. D., of Rush Medical College; from the authors.

On the Fresh Water Algæ and their Relation to the Purity of Public Water Supplies, by G. W. Rafter; from the author.

Compendium of the Laws Relating to the Public Health and Safety, State of Penn.; from Benjamin Lee, M. D., Secretary of the S. B. of H.

Fourth and Fifth Annual Report of the Board of Health, City of Newark, N. J.; from L. D. Wallace, M. D., Secretary.

Secretary's Report.

Treatment of Torticollis, by C. F. Stillman, M. D.; from the author.

Color Perception, by H. V. Wurdemann, M. D.; from the author.

Report of the Board of Health, City of Reading, Penn.; from E. A. Howell, M. D., Secretary,

The Brooklyn Health Exhibition; from A. N. Bell, M. D., Editor of the Sanitarian.

Quarantine System of Louisiana; from S. R. Olliphant, M. D., President of the Louisiana S. B. of Health.

Volvox Globator as the Cause of Fishy Taste and Odor in Hemlock Lake, New York, by G. W. Rafter; from the author.

Report of Small Pox Epidemic, Sheffield, England, Report on Diphtheria, by J. Buchanan, Medical Officer of the Local Government Board, London, Eng.

Relation of Meteorological Conditions to Diseases of the Lungs, Malaria and Causation of Periodic Fevers; from the author, H. B. Baker, M. D., Secy. S. B. of H., Mich.

New Form of Posterior Colporrhaphy, Relation of Dress to Pelvic Diseases of Women, Report of the Graduating Exercises of the School for Nurses, Battle Creek, Mich.; from the author.

A New Plate for Intestinal Anastomosis; from F. B. Robinson, B. S., M. D.

Report of the Chief of the Forestry Division of the U. S. Department of Agri. for 1889; from B. E. Furnow, Chief of Dept.

Seventh Annual Report, Agri. Experiment Station, University of Wisconsin; from W. A. Harvey, Director.

Annual Report, Board of Health, City of New Haven, Conn.; from F. W. Wright, M. D., Health Officer.

Local Boards of Health in New York State; from Lewis Balch, M. D., Secretary of the S. B. of H. of N. Y.

Transactions of the Kansas State Historical Society, Volume 4; from F. G. Adams, Secretary.

Secretary's Report.

Report of the Public Schools of the City of Fond du Lac, Wis.; from I. N. Mitchell, Superintendent.

Longevity and Climate, by P. C. Redmondino; from the author.

Register of Physicians in Pennsylvania from 1881 to 1888; from Benjamin Lee, M. D., Secretary of the S. B. of H. of Pa.

Healing of Aseptic Bone Cavities; from the author, William Mackie, M. D.

The Right Application of Heat to the Conversion of Food Material; 2 copies; from the author, Edward Atkinson, Boston.

The Moral Imbecile, "Provision for Idiotic and Feeble Minded Children;" from the author, I. N. Kerlin, M. D., Supt. of Inst. for F. M. Children, at Elwyn, Pa.

The State's Duty to Epileptics, by Geo. H. Knight, M. D.; from I. N. Kerlin, M. D.

The Contagiousness of Phthisis, and "Special Hospitals for the Treatment of Tuberculosis"; from the author, Lawrence M. Flisk, M. D.

Cerebral Localization and Brain Surgery, and "Multiple Neuritis"; from the author, Prof. Archibald Church, M. D.

Filtration of Sewage, Biographical Examination of Potable Water, Report on an Endemic of Typhoid Fever at Springwater, N. Y.; from the authors, G. W. Hafter and M. L. Malory.

The Board has been regularly in receipt of the monthly bulletins published by the State Boards of Health of Iowa, Maine, Minnesota, North Carolina, Ohio, Rhode Island and Tennessee; bulletins of the Essex Institute of Salem, Mass.; The Confectioners' Journal; Architecture and Building, a weekly journal, from the publishers, Messrs. Comstock, of New York city; "Good Health," from J. H. Kellogg, M. D., editor.

Monthly or weekly statements of mortality have been regularly received from the following State and Local

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Boards of Health: California, Connecticut, Louisiana, Massachusetts, Michigan and New York; Brooklyn, Buffalo, Denver, Mansfield, Ohio; Milwaukee, Mobile, Ala.; Nashville, Tenn.; Newark, N. J.; New Haven, Conn.; Portland, Me.; St. Louis; St. Paul, and Hudson Co., N. J., together with occasional copies of similar reports from several other localities.

There are received also weekly "Abstracts of Sanitary Reports," from J. B. Hamilton, M. D., Supervising Surgeon Marine Hospital Service, for distribution to the members of the Board.

PURCHASES.

The journals received regularly by the Board on subscription are, The Annals of Hygiene, The American Journal of the Medical Sciences, The Engineering and Building Record, The Medical Record, The Medical News, The Popular Science Monthly, The Popular Science News, The Sanitary News, The Sanitarian, The Wisconsin Journal of Education, The Sanitary Record of London, Eng., and The Sanitary Journal of Glasgow, Scotland.

The books purchased are as follows:

Annotated Statutes of Wisconsin; Sanborn and Berryman.

Annual of the Medical Sciences, 1888 and 1889; Sajous. Diphtheria; Sonne.

Encyclopedia of Diseases of Children, Vols. 1, 2 and 3 Keating.

Hand Book for Teachers; Stewart.

Hygiene of the Nursery; Starr.

Laws of Heredity; Williamson.

Map of Wisconsin.

Medical and Surgical Register of the U. S.

National Medical Dictionary.

Practice of Medicine; Fagge and Pepper.

Public Health, Vols. 13, 14 and 15; Am. Pub. Health Association.

Secretary's Report.

Reference Hand Book of the Medical Sciences, Vols. 7 and 8.

Surgery; Gerster's and Wyeth's.

Trees and Tree Planting; Brisbane.

The Health of Nations, 2 Vols.; Chadwick.

Town, County and School Buildings.

Together with the following school text books on Anatomy, Physiology and Hygiene: Tracy's Anatomy; Physiology and Hygiene; Child's Health Primer, Pathfinder Series; Eclectic Guide to Health; Kellogg's First Book in Physiology and Hygiene; Health Lessons, Walker; Stowell's Healthy Body; Brown's House I Live In, 2 copies; Johnonet's How We Live; Martin's Human Body, Adv. Series; Hygiene for Young People; Steele's Hygienic Physiology; Johnonet's & Bouton's Lessons in Hygiene; Outlines of Anatomy and Physiology; Physiology and Health No. 1; Physiology and Health No. 2; Dulaney's Physiology; Physiology and Hygiene; Youth's Temperance Manual.

EXPENSES.

The expenses for the biennial period ending September 30th, 1890, include bills audited and approved by you, numbered from 929 to 1,121 inclusive. Deducting from these for salary of secretary and for clerical expenses referred to in my last report as due and not paid, the expenses have averaged \$4,646.06 per year, and for the biennial period are classified as follows:

Official expenses of members,	-	\$1,597.16
Postage and telegraphy	- - -	627.62
Express and freight	- - -	120.66
Salaries, secretary and clerical	- - -	5,941.63
Printing, circulars, etc.	- - -	416.36
Paper and stationery	- - -	126.67
Books, periodicals and instruments	- - -	416.54
Furniture and repairs	- - -	32.68
Miscellaneous	- - -	16.80

Secretary's Report.

I cannot close this report without expressing my obligation to the several members of the Board for the valuable assistance you have rendered and for the kindness and courtesy which you have uniformly extended to me.

I wish also to express my appreciation of what you have as members of the Board done for the state. Serving it wholly without compensation, I am fully aware that you have done so in many instances at the sacrifice of time you could illy afford to spare from your professional duties, and also at no inconsiderable pecuniary loss to yourselves.

I acknowledge also valuable assistance received from Mr. E. E. Dunn, who during the past year has been employed as chief clerk in the office of the Board.

Very Respectfully,

J. T. REEVE, M. D.,

Secretary.

APPLETON, Wis., October 31st, 1890.

4—B H.

Sanitary Condition of the Public Schools.

SANITARY SURVEY AND REPORT OF THE SCHOOL BUILDINGS AND GROUNDS OF THE LEADING SCHOOLS OF THE STATE OF WISCONSIN.

BY G. F. WITTER, M. D., OF GRAND RAPIDS.

In February, 1890, the following circular was sent to some 500 teachers and officers of the public schools of Wisconsin, in the name of the State Board of Health, and with the avowed object of "ascertaining as accurately as possible the present sanitary condition of the Public Schools of the State, and their surroundings."

WISCONSIN STATE BOARD OF HEALTH.

GRAND RAPIDS, WIS., February 26, 1890.

To Teachers and Officers of Public Schools in Wisconsin:

The State Board of Health desires to ascertain as accurately as possible the present Sanitary Condition of the Public Schools of the state and their surroundings, and also the character and sources of the water used in them for drinking purposes, and has appointed the undersigned as a special committee to investigate this matter.

To aid in this investigation, which is undertaken with the approval and assistance of the State Superintendent, through whose office you will receive this circular, you are earnestly requested to fill the blanks in it as to the school under your charge, with special care as to correctness and completeness, and to return the same as soon as possible in the accompanying stamped envelope. It is the purpose to use the information obtained by this inquiry in the preparation of an article for the next report of the State Board of Health, and it is hoped that by this means something may be done to raise the standard of sanitation in our Public Schools—a service the value of which it would be difficult to overestimate.

Please read carefully what is printed in small type under the blanks before filling the same, that your answers may be clear and definite.

Any information cognate to this subject, and not suggested to you by this blank will be welcome. Please use a separate sheet for any information you wish to have regarded as confidential, and write the word "Confiden-

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tial" at the head of the sheet. If such information is used at all it will be wholly in an impersonal way.

Very respectfully,

G. F. WITTER, M. D.

1. Name.	The school referred to in this report is known as..... Give special
2. Location.	 It is situated in School District No. in the name of school, if any. of, in the county of..... Town, village or city.
3. Character.	, Wisconsin. This school is a school, Common, High, Normal.
4. Number of Scholars.	having an enrollment of pupils and an average attendance of pupils. The school is It is Graded or not graded. stories in height and contains rooms. The
5. Floor space	floor space in these rooms for each pupil enrolled is
6. Air space.	The floor space for each pupil in average attendance is The cubic feet of air space for each pupil enrolled is.... and the cubic feet of air space for each pupil in average attendance is If certain rooms are greatly overcrowded and others not so, please state the fact here, and give size of room with number of pupils.
7. How built & drained.	The school-house is built of It is located on ground that is It is High and dry or low and wet. Well or poorly. drained, as follows: Describe its drainage carefully; state whether connected with public sewer or not; illustrate if convenient, by rough diagrams.
8. Care of grounds.	The ground belonging to the school is..... State whether fenced and well cared for or not; how large the play-ground is; whether shaded or not, etc.
9. Heating.	The building is heated by Its heating arrangements are cared for by... Stoves, steam, etc.
10. Ventilation.	The building is ventilated as follows: Describe its means of ventilation particularly, and give your idea of its efficiency.
11. Light.	The windows in this school are so arranged that light comes to the pupils from State whether from left or right, from the rear or in front. If from different directions, state that fact.

Sanitary Condition of the Public Schools.

12. Black boards.

The proportion of window space to floor space is about as to The window sills are inches from the floor. The Black Boards are arranged as follows: State if be-

tween windows or not, and whether pupils in using them face the light or not; and whether surface of board is "dead" or glossy.

13. Disposal of waste.

The excreta of pupils is disposed of as follows: Describe whether

it be in privies, by the dry earth or dry air system. If either of the latter, state whether the plan is satisfactory and inoffensive. If privies are used state depth of vault, how often disinfected and emptied, whether separate apartments for boys and girls, whether offensive or inoffensive, etc. Give careful description. If there are "water closets" state that fact.

14. Water.

The drinking water used in the school is It is Hard or soft.

obtained from Wells, springs or public water supply. If from wells, state whether dug, driven or artesian, and what precautions are taken to preserve their purity. Describe the surroundings of wells, distance from any of the following: Privies, cess-pools, pig pens, stables, barn yards, drains, sewers, pools of stagnant water, cemeteries, factories or any other establishments discharging foul water or offensive liquids of any kind in considerable quantities. State the least distance between the well and any one of the things just mentioned. If there has been an analysis of the water used, send copy of the report of such analysis.

15. Vaccination.

Pupils required to be vaccinated before entering this school. Are or are not.

16. Contagious diseases.

Pupils in whose families contagious disease exists Are or are not. excluded from attendance in this school.

If excluded state for how long and on what order, or by what authority they are readmitted.

17. Typhoid fever.

Typhoid Fever been prevalent in the place where this school is situated, and, ... Has or has not at any time Has or has not

Sanitary Condition of the Public Schools.

	affected the pupils in attendance upon it..... If prevalent at any time within your knowledge state whether it was or was not traceable to any particular source of water supply. State also if any other diseases have been prevalent in school which were thought to be due to any unsanitary condition in the school-house or its surroundings.
18. Examinations.	The building has been examined as to its sanitary condition during the past year as follows: State when and by whom.
19. Improvements.	The following changes have been made in the school building within the last year by which the sanitary condition has been improved.....
20. Defects.	In my opinion the chief defects of this school from a sanitary standpoint are
21. Additional information.	In addition to the information above given, the following facts in connection with the sanitary history or condition of this school seem to me of special interest..... Name of person making above report..... Postoffice address of person making above report Co., Wis. Date... ..

The large share of those to whom the above circular was sent responded heartily, many giving minute and valuable information. On these returns representing each county of the state, the following table and report are based.

Sanitary Condition of the Public Schools.

Table of sanitary statistics concerning the Public Schools of Wisconsin.

Number reporting on each question in above circular.		Number in each division.	Per cent. of total reports on each question.
	(1) NAME. (2) LOCATION.		
	(3) CHARACTER OF SCHOOLS.		
842.....	High schools.....	127	87
	Common schools.....	215	63
836.....	Schools with five or more rooms.....	113	83½
	Schools with less than five rooms.....	223	66½
808.....	Enrollment over 200.....	110	86
	Enrollment under 200.....	198	64
801.....	Average over 200.....	95	81
	Average under 200.....	206	69
	(4) NUMBER OF SCHOLARS, ETC.		
238.....	Schools with enrolled average over 50 in a room.....	119	40
	Schools with enrolled average under 50 in a room.....	179	60
838.....	Schools graded.....	255	78
	Schools not graded.....	73	22
833.....	Buildings one story.....	115	35
	Buildings two stories.....	185	56
	Buildings three stories.....	29	8
	Buildings four stories.....	4	1
	(5) FLOOR SPACE.		
826.....	For each enrolled pupil. { 25 or more sq. ft.....	57	18
	{ 20 to 25 sq. ft.....	70	21
	{ 15 to 20 sq. ft.....	114	35
	{ Under 15 sq. ft.....	85	26
298.....	For each pupil in average attendance. { 25 or more sq. ft.....	126	43
	{ 20 to 25 sq. ft.....	80	27
	{ 15 to 20 sq. ft.....	82	27½
	{ Under 15 sq. ft.....	38	12
	(6) AIR SPACE.		
302.....	For each enrolled. { Above 300 cu. ft.....	72	24
	{ From 200 to 300 cu. ft.....	117	39
	{ Under 200 cu. ft.....	113	37
301.....	For each in average attendance. { Above 300 cu. ft.....	128	42
	{ From 200 to 300 cu. ft.....	119	40
	{ Under 200 to 300 cu. ft.....	54	18
	Some rooms reported overcrowded.....	58	20
	(7) HOW BUILT AND DRAINED.		
351.....	Stone.....	18	5
	Brick.....	145	41
	Wood.....	183	53
	Logs.....	5	2
311.....	High and dry.....	217	70
	Low and wet.....	40	13
295.....	Well drained.....	243	82½
	Poorly drained.....	52	17½
300.....	By sewerage system.....	88	12
	By drains.....	30	10
	By slope of ground.....	203	68
	Level and no drainage.....	29	10

Sanitary Condition of the Public Schools.

Number reporting on each question in above circular.		Number in each division.	Per cent. of total reports on each question.
(8) CARE OF GROUND.			
836.....	Fenced.....	179	53
	Not fenced.....	157	47
814.....	Well cared for.....	160	75
	Poorly cared for.....	54	25
220.....	Over four acres in grounds.....	10	4
	From one to four acres in grounds.....	138	49
	Under one acre in grounds.....	132	47
207.....	Grounds shaded.....	181	60
	Grounds not shaded.....	126	40
(9) HOW HEATED.			
851.....	Furnace.....	73	21
	Stoves.....	245	69½
	Steam.....	32	9
	Hot water.....	1	½
815.....	Cared for by janitor.....	194	62
	Cared for by teacher.....	121	38
(10) VENTILATION.			
880.....	Schools with ventilators.....	137	36
	Schools using specially named system.....	38	10
	Schools ventilated by windows and doors.....	205	54
180.....	Ventilation reported good.....	59	32
	Ventilation reported fair.....	39	21
	Ventilation reported poor.....	88	47
(11) LIGHT.			
846.....	From back and one side.....	107	30
	From both sides.....	226	65
	Front in same rooms.....	47	14
	From back only.....	0	0
295.....	Proportion of window space to floor.		
	Over 1-3.....	18	6
	From 1-3 to 1-6.....	110	37½
	From 1-6 to 1-12.....	148	50
	Under 1-12.....	19	6½
288.....	Window sills 30 inches or over.....	230	80
	Window sills under 30 inches.....	58	20
(12) BLACKBOARDS.			
824.....	Blackboards opposite windows.....	123	38
	Blackboards opposite and between windows.....	201	62
271.....	Blackboards with surface "dead".....	220	81
	Blackboards with surface glassy.....	51	19
(13) DISPOSAL OF WASTE.			
235.....	In common privies.....	265	82
	Privies with dry earth system.....	30	9
	Privies with dry air system.....	20	6
	Closets flushed by sewage.....	10	3

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Number reporting on each question in above circular.		Number in each division.	Per cent. of total reports on each question.
211.....	Vaults over five feet deep.....	146	69
	Vaults less than five feet deep.....	65	31
239.....	Disinfected and emptied often.....	44	19
	Disinfected and emptied not often or never.....	140	58
	Disinfected and emptied once a year.....	39	16
	Disinfected and emptied twice a year.....	10	4
	Disinfected and emptied each week.....	4	2
	Disinfected and emptied every two weeks.....	2	1
237.....	Separate for boys and girls.....	285	99
	Not separate for boys and girls.....	2	1
	Water closets additional.....	43	15
197.....	Privies reported offensive.....	104	53
	Privies reported not offensive.....	93	47
(14) DRINKING WATER.			
307.....	Hard.....	234	76
	Soft.....	73	24
338.....	From wells dug.....	153	45
	From wells driven.....	68	20
	From wells, artesian or drilled.....	53	15
	From cisterns.....	7	2
	From springs.....	15	4
	From public water works.....	42	12
231.....	Distant from sources of pollution { Over 100 ft.....	120	54
	{ From 60 to 100 ft.....	58	26
	{ Less than 60 ft.....	43	20
231.....	Analysis of water made.....	8	2
	No analysis of water made.....	69	30
	Reported good.....	52	23
	Reported bad.....	12	5
(15) VACCINATION.			
343.....	Required.....	27	8
	Not required.....	316	92
(16) PUPILS IN WHOSE FAMILIES CONTAGIOUS DISEASES EXIST.			
333.....	Excluded from schools.....	275	83
	Not excluded from schools.....	58	17
333.....	Returned by order of physician.....	275	83
	Returned by other permission.....	58	17
(17) TYPHOID FEVER.			
306.....	Reported prevalent.....	21	7
	Reported not prevalent.....	285	93
31..	Thought to be caused by poor water.....	5	2
(18) EXAMINATION OF PREMISES.			
315.....	By Physician or Board of Health.....	30	14
	By other means.....	51	24
	Not examined.....	134	62

Sanitary Condition of the Public Schools.

Number re- porting on each ques- tion in above cir- cular.		Number in each division.	Per cent. of total re- ports on each ques- tion.
	(19) IMPROVEMENTS MADE DURING YEAR.		
	Calculated.....	11	15
	Privies rebuilt.....	10	14
	Ventilation improved.....	11	15
	New floors.....	4	5½
	Shingled and painted.....	5	7
	Better stoves.....	4	5½
	Introduced drainage.....	2	2
	Introduced Rutan system.....	2	4
	Put on storm windows.....	2	3
	Seats turned from light.....	2	3
72.....	New bell and seats.....	2	3
	Curtains.....	1	1½
	School houses built.....	8	11
	Steam introduced.....	1	1½
	New well and pump.....	1	1½
	New rooms added.....	3	4
	New walks.....	1	1½
	Doors put in storm windows.....	1	1½
	Put in more windows.....	1	1½
	Blinds.....	1	1½
	Painted.....	2	3
	(20) DEFECTS EXISTING.		
	Inadequate ventilation.....	143	43
	Poor heating arrangements.....	38	11
	Bad privies.....	94	27½
	Bad light.....	51	14½
	Lack of drainage.....	12	4
	Rooms too crowded.....	46	13½
	Lack of curtains.....	4	1
	Poor water.....	21	6
	Well under building.....	2	½
843.....	Seats in primary too high.....	2	½
	Poor floors.....	3	1
	Lack of cleanliness.....	4	1
	Nearness of water.....	1	½
	Lack of sidewalks.....	1	½
	Poor desks.....	1	½
	Drafts in halls.....	1	½
	Smoky chimney.....	1	½
	Stairway too steep.....	1	½
	Need of play room in basement.....	1	½
	Teachers cannot control heat because of janitor.....	1	½

In compiling this table from the individual reports some things are very impressive—indeed it contains a mine of information concerning the things which affect the health, mental activity and general good of the children and youth of our state.

QUESTION 4. NUMBER OF SCHOLARS.

The table shows that scholars of over 200 enrollment are 36 per cent. of the number reported, while the number with

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average over 200 is only 31 per cent., a difference of 5 per cent. The individual reports show in many cases a much wider diversity. In some schools the average crowds hard upon the number enrolled; in others the average is scarcely two-thirds of the enrolled. This is a very important point as regards the efficiency of school work.

A very commendable proportion of schools are reported as graded; the 22 per cent. still ungraded should see to it that they are not long left in the small minority.

QUESTION 5. FLOOR SPACE.

The number of square feet for each pupil enrolled and average, shows a great diversity as regards room in school buildings.

Twenty-five square feet to each scholar is regarded as good, by sanitary authorities, but only 18 per cent. of our schools show this area. More than half are below grade. Eighty-five schools show an average for enrolled scholars of less than 15 sq. ft., and thirty-eight schools less than this space for average attendance. Fifty-eight schools acknowledge an overcrowded condition, especially in their primary departments, where the children are least able to bear the effects of impure air.

Three schools report their floor space as only 7 sq. ft. for each enrolled, and 9 for each average scholar, and the corresponding air space as only 78 and 96 cu. ft. What a contrast to another school, which reports 40 sq. ft. floor space, and 400 cu. ft. air space.

A similar contrast is found in one of our large cities between two ward schools whose floor space is respectively 10 and 11½ sq. ft., and air space 122 and 141 cu. ft., and the high school in the same city with 42 sq. ft. and 625 cu. ft. for each enrolled scholar.

QUESTION 6. AIR SPACE.

The table here shows a wonderful agreement, and proves the accuracy of the preceding. Only 24 per cent show the

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needed 300 cu. ft. of air space, while the small average attendance in many cases reported helps this only to the number of 42 per cent.

Surely there ought to be some means provided to relieve this crowded condition of many of our schools.

QUESTION 7. HOW BUILT AND DRAINED.

Fifty-two per cent. of schools reporting have houses built of wood, 41 per cent. of brick, and 5 per cent. of stone. Five log school-houses appear on the list.

It is very noticable that 68 per cent. of the school grounds are represented as drained by natural slope, showing as was often pictured in the reports, that our school buildings are generally placed in elevated positions. Twenty-two per cent of those not thus highly favored have drainage, but 10 per cent. are low and wet and have no drains.

One says, "Our school grounds are poorly drained. They are 'made' ground that has sunk below the level of the street, and every rain converts it into a mud puddle."

Another speaks of "water settling into the basement"; another, "Our yard is filled with water in the spring of the year." Another suggests as a probable cause of the fatality of Scarlet Fever "their low wet grounds."

Twelve complain of lack of drainage as one of the defects of their schools, and twenty-nine report their school grounds "level and with no drainage."

QUESTION 8. CARE OF GROUNDS.

School grounds differ very materially in area. Ten report over four acres in their campus; 138 have from one to four acres; 132 less than one acre, and 2 no play ground at all. About half of these are fenced, shaded and well cared for; some in the cities not fenced have fine lawns, but in very many cases little attention is given to these things so important for the cultivation of refinement and taste, to say nothing of the comfort of the pupils.

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QUESTION 9. HEATING.

This brings us to a subject of vital importance—the heating of the buildings. A little more than two-thirds secure their warmth from stoves, one-fourth from furnaces, and the balance from steam or hot water. Two-thirds are cared for by janitors and one-third by the teachers. But the means of heating is far less important than the manner, and a janitor who does not understand or do well his part may be anything but a blessing.

One teacher complains that they suffer from irregular heat, because it is in the hands of a janitor and they cannot help themselves.

Another says it is too hot near the stoves and too cold away from them; and so colds are invited. Another, “My scholars are troubled with headache.” Another, “The temperature in my room varies from 50 to 90 degrees, often the scholars have to walk about to keep warm. Many of them are afflicted with hard colds.” Another, “The temperature is rarely above 50 degrees in our room before noon.” Another says the floor is so poor and has so many knot holes that often the feet of the pupils suffer while their heads are hot. One teacher had nailed cotton cloth over loose windows to keep out the drafts.

But happily these are the exceptions; in many places great care is taken concerning these things. One janitor never lets his rooms “vary a degree from 68 degrees,” and often rises, in extra cold weather, at three o'clock in the morning to bring his rooms to the proper temperature. Two schools have introduced a heat controlling device which they consider a valuable help.

Let janitors and teachers remember that the health of the scholars and their ability to do good work depends, in a great measure, upon an even and proper degree of heat.

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QUESTION 10. VENTILATION.

This brings us to a subject beset with greater difficulties than any other, unless it be the disposal of waste, and probably the most important in its bearing upon the health and efficiency of our children.

Some of our best schools and churches are furnished with flues, artificially heated, which carry off the foul air so rapidly that the whole supply can be changed every five minutes; but how is it with our school-houses generally? Only 46 per cent. have any means provided for this purpose, and only 32 per cent. report ventilation good. 54 per cent. of our schools have to resort to the opening of doors and windows and incur the danger of colds from drafts. One of our educators says, that entering a district school he found the effluvia of breath and uncleanly persons so strong that he could think of nothing but the black hole of Calcutta. This was an extreme case, but in how many schools is the air thrown off from the lungs, laden with carbonic acid gas and the waste of the body, to say nothing of germs of disease, should they chance to be lurking in the system of any, breathed over, over and over again, failing to give the oxygen needed to purify the blood and secure vigor; and resulting in dullness, inaction, headaches and a low condition of the system, inviting colds and the spread of contagious diseases. Is this what parents want when they send their children to school, and pay the taxes for their instruction?

The following are some of the complaints which come in our reports: "No ventilation, pupils suffer from colds." "Bad light and ventilation, the basement and wood room not cleaned for seven years." "Poor ventilation, crowded, privies offensive, scholars not in good health." "Room crowded, ventilation very poor. Privies in a wretched, filthy, broken down condition, stagnant water in the vaults; the comfort, health and moral atmosphere

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of the pupils are neglected here." "Ventilation as poor and inefficient as it is possible to have it, heating imperfect, water supply poor." One principal gives his report for two school buildings in the same city, one of which is erected with regard to sanitary conditions, the other continues in the old way.

"No. 1 embraces two acres, is on high ground, beautifully shaded and well cared for; has 25 sq. ft. of floor space and 396 cu. ft. air space to each pupil, has an exceedingly good ventilating system; furnace of sufficient capacity to renew the air in every room every seven minutes, with privy vault six feet deep and cleaned annually, water very pure. No. 2 is crowded, on river bottom, with merely surface drains, which are flooded for two months in the year, has no ventilation except doors and windows. Diphtheria and Scarlet Fever were common among the pupils of this school before the supply of fountain water was secured three years ago, there have been few if any cases of either since then. Pupils in school No. 1 do better work, are more rugged and brighter than those of No. 2. I attribute this to the difference in air supply of the two places, which in No. 1 is very superior, and in No. 2 is inferior." Could a better object lesson be placed before us; why not have all our schools like No. 1?

It is a matter of congratulation that so much attention is being turned to this subject. That 142 teachers should complain of inadequate ventilation, shows that thought is being awakened. That 40 schools have introduced efficient ventilating systems, and that 11 have improved their means of ventilation during the past year, is encouraging. One teacher says he is regarded by his school board as a crank on pure air; would that such cranks might rapidly multiply.

After such testimony, school boards about to erect new buildings or change old ones, ought to consider proper ventilation a prime necessity, and endeavor to secure the best.

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It is enforced with emphasis when a teacher in one of our largest schools reports, "Smoke often comes down the foul air shaft; and coal gas always, when the fires are low, or wind blows wrong." And another, "Ventilation is decidedly poor, the closets being in the basement, a strong odor is occasionally perceptible in the rooms of the upper floor."

These are stubborn facts and ample cause of much bad health among the scholars. We are surrounded by an ocean of air — what reason can be assigned for shutting it out from our pupils? A better supply of pure air is the almost universal demand in our reports.

The power and dignity of the state is involved in the physical and mental welfare of each member of the community, and no more important subject can claim the attention of the sanitarian than that of providing or urging the means by which better ventilation can be secured in the schools and homes of the people. It is not too strong an expression when we assert that millions of human lives are being sacrificed annually by the want of pure air — a primal necessity of our being. A sound mind can seldom be discovered unless associated with a healthy body.

Eight parts of carbonic acid to ten thousand parts of air has been named as the maximum impurity which can be endured without injurious consequences, but the sanitary survey of the schools of the state unfortunately shows that, in a large share of them, the proportion of carbonic acid in the air breathed by the scholars, in the young and formative periods of their lives, is at least five times as great as science permits.

Three hundred and sixty cubic inches of air per minute is the quantity required for respiration by an adult; the child needs but little less. Air breathed once is unfit for use again, because it has lost a portion of its oxygen and become charged with carbonic acid to one hundred times its former volume, and not only this, but it is loaded with

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offensive animal vapor, and oft times bacteria, which become a terrible factor in spreading disease.

School boards should see to it, not only that school rooms have the requisite number of square feet floor space and cubic feet of air space, but that ventilating arrangements be introduced which will change the air every few minutes and keep it pure.

This is especially necessary for the student whose sedentary occupation and brain labor make special demands upon the vital powers.

Some teachers in small buildings will say, what can we do who cannot expect the introduction of any system of ventilation. A few teachers by their ingenuity have somewhat lessened the difficulty by nailing cotton cloth over frames and placing them in the open windows, or placing a narrow board under the lower sash, but these devices though useful are manifestly insufficient.

QUESTION 11. LIGHT.

This subject assumes increasing importance from the large number who suffer from weak eyes and difficulties of sight; for such the very best conditions are a necessity, for others a security.

If the light comes from both sides of the room the pupil can not turn away from it, and in 59 per cent. of buildings reported this is the case. In only 28 per cent. does the light come from back and one side, while in 13 per cent. in one or more rooms the light is directly in front of the scholars. In some cases the brightness is dimmed by curtains, but many lack even this help. One report speaks of a teacher as having her eyes permanently injured by the light of windows in front of her desk, and many of the pupils as having to wear glasses.

The light should come if practicable from the rear, or left and rear. It should not be allowed to shine in the face or on the books or desks of pupils—if the windows permit

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this they should be shaded by curtains. The high school in Milwaukee presents an excellent showing in this respect. The report says, "Our building is well lighted. The windows are so arranged that in nearly all the rooms the light comes to the pupils from the left, in a few of the rooms from the right and rear.

QUESTION 12. BLACKBOARDS.

This is closely related to the preceding, and is of great importance as regards the eyes of the pupils.

In 6 per cent. of our buildings the proportion of window space to floor space is more than one-third, in marked contrast to $6\frac{1}{2}$ per cent. where it is less than one-twelfth. In $37\frac{1}{2}$ per cent. it is between one-third and one-sixth, and in 50 per cent. between one-sixth and one-twelfth. This shows a great diversity in regard to light, which in very many cases must be entirely inadequate.

The location and condition of the blackboards is also an additional cause of injury to the eyesight of the pupils. In no less than 62 per cent. of the school buildings some of the blackboards are between windows, making it necessary for those using them to face the light. In addition to this in 19 per cent. of the schools the boards are glossy, making it still more trying for the eyes and a permanent injury to many. The blackboards should be a dead black and placed opposite the windows. This is already the case in 38 per cent. of our schools.

QUESTION 13. DISPOSAL OF WASTE.

The reports upon this subject remind us of the words of an orator who in the height of impassioned debate said, "If you have tears prepare to shed them now." For it seems to me the most difficult problem to solve, certainly the one concerning which most negligence is manifested.

Many teachers report that in the three, four and eight years of their teaching on the place, no attention has been given to the subject, and conditions are most offensive.

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Considered in the sense of hygienic and esthetic culture, "the true test of a nation's civilization is to be found not in the splendor of its public buildings, but in the neatness of its privies."

If children are for years trained in barbarism, how will it be possible to correct the evil influences of early life; but neat and cleanly habits in youth are a means of sanitary progress.

Our table shows that 82 per cent. of our schools have common privies, in all but two cases separate for the sexes, but this often means one building with a board partition, a very poor apology for the need, and especially the privacy these buildings should furnish.

Only 18 per cent. use systems of dry earth, or dry air, or flushing to secure purity, although some others disinfect with coal ashes or other means, and empty occasionally. Fifty-eight per cent. report, "not often emptied or disinfected," which generally means less than once a year; in many cases never.

One hundred and four of the 197 reporting on this point acknowledge their privies offensive; many say "very offensive." The following are some of the testimonials of teachers: "During the three years I have been here the privies have never been disinfected or emptied." This is substantially the expression of at least a score of witnesses. Another says, "Privies very offensive; when full, covered, and new ones dug. We are seeking relief by movable boxes." A teacher in a prominent school suggests that a pamphlet circulated on the care of privies would do much good. Another, that privies ought to be arranged for separate individuals on sanitary and moral grounds.

Those who use the dry earth or dry air systems and give them attention universally report them successful.

When such relief is within our reach, and especially when in our small schools, a few shovels of coal ashes or dry earth every other day will prevent offense, what right

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has any school to permit such a state of things as the following reports show: "Have not been disinfected or emptied in six years; many times very offensive." "Never disinfected or intended to be emptied until full." "Two privies filled to the brim or nearly so, uncared for and very offensive." "Will smell to heaven in summer." "Privies have an excavation about three feet deep. These holes are never emptied or disinfected; they are very offensive." "Privies are in a dilapidated condition; never emptied or disinfected to my knowledge." "Privies are too near the school-house." Many complain of having no vault. The condition of things revealed in these reports and partly made manifest by these quotations, is a disgrace to the school boards of our state, who ought to attend to these matters and wipe out this shame from the nurseries of our youth. Privies ought to be at a good distance from the school buildings, one for each sex, with an ample number of seats separated by partitions, and additional urinals for the boys. They should be screened from public view so as to protect the modesty of the scholars, kept clean and disinfected often. Negligence in these things ought to forfeit the receiving of state funds by the school until attended to.

QUESTION 14. WATER SUPPLY.

No source of disease seems so direct and immediate as the drinking of impure water, while on the other hand if the water is good, the human system is able to wrestle with many other insanitary conditions, and still retain its health. Pure water, like charity, seems able to hide a multitude of sins.

One teacher referring to a number of unsatisfactory conditions in his city schools, coming to the question of Typhoid Fever, exclaims "Mirabile dictu," it has not been prevalent, and refers to their fountain water as the only explanation of its absence. Another, picturing the condi-

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tion of a school about as bad as it would be possible to have it, says, "previous to three years ago, when artesian water was introduced, we suffered from contagious diseases year after year, but since then have been almost entirely exempt."

Our table shows 76 per cent. of our school wells as furnishing hard water, 24 per cent. soft water; 45 per cent. of these are dug, 20 per cent. driven, 16 per cent. artesian or drilled, 6 1-2 per cent. from cisterns or springs, and 12 1-2 per cent. from public water works; 54 per cent. are situated more than 100 feet from any source of pollution, 26 per cent. from 60 to 100 feet, while 20 per cent. are less than 60 feet from such source, at least indicating danger. Out of 338 wells reported, only eight have had analysis made of the water, 52 call their water good and 12 bad.

Some individual reports give us further light. One says, "Stable two rods from well." Others, "Water becomes muddy after pumping a few minutes, think it must be bad." "There is a well on school grounds with sufficient water but it is not fit for use for lack of care in putting in pump and nearness to cess pool." "No caution is taken to preserve purity of water, there is no well on the school grounds, and much of the water in the place is tainted so that it can be tasted."

It is particularly noticable that when artesian water is used, or when wells are especially good, that there is a marked freedom from fevers and contagious diseases; notice a few further testimonies: "Have excellent water (artesian), no Typhoid Fever or contagious diseases." "Our city water is pronounced the finest of any in the state, being obtained from wells 960 feet deep. No fevers or contagious diseases." "The famous Chippewa Springs supply each building; analysis has shown this water almost absolutely pure; no disease has found its way into the school." "Our well, dug and walled with rock, is cleaned several times each year, least distance from anything objectionable is

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about 40 yards, with one exception Typhoid Fever has not affected the pupils, this being over fifteen years since."

Do not these facts show the importance of careful attention to the water we drink and allow our children to drink, that they may be free from this fruitful cause of disease?

QUESTION 15. VACCINATION.

The reasons for urging the vaccination of all persons, before being admitted to the school room, are so obvious that their correctness is usually granted.

Yet our survey demonstrates that in 92 per cent. of the schools vaccination is not required. It is made the rule only in the schools of Milwaukee, Madison, De Pere, Berlin, Richland Center, Sheboygan and Ashland.

The result is, should Small Pox break out in most of our towns, schools would have to be closed. Therefore no child should be allowed to enter school until properly vaccinated. This is now acknowledged by educators and sanitarians, and its justice is recognized by our health boards, and yet it is generally disregarded. It should become a law enforced throughout the state.

QUESTION 16. CONTAGIOUS DISEASES.

Reports show that in 83 per cent. of our schools, children with contagious diseases are excluded, and not allowed to return without a certificate from a physician or local board of health. Seventeen per cent. have no rule upon this subject.

With proper care for sanitary conditions in our schools and homes, and with proper exclusion when an isolated case occurs, contagious diseases can be controlled, and prevented from becoming general, but there are not wanting those who, from ignorance or carelessness, will allow their children to enter the sick room, and then go to church, Sabbath school, and the day school: and if death occurs from these diseases, they take it very hard if they

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are not permitted to have a public funeral, and so spread still further the germs of disease. Public sentiment ought to demand restrictions which will save us from such exposures.

One teacher says, "Diphtheria has raged here all winter. The schools were closed for a short time, but a satisfactory quarantine was not established to prevent the pupils from associating on the streets with members of those families in which the disease raged; the result was several deaths and a very irregular attendance at school."

As throwing further light upon this case let me quote what this same teacher says under another head: "Our chief defects in school are want of proper ventilation, and poor heating apparatus; we have been unable to keep the rooms at a proper temperature, the stoves are poor and wood very green, seldom were able to raise the temperature of the rooms above 50 degrees until noon."

Another says, "We have had cases of Diphtheria and Scarlet Fever funerals, school children serving as bearers; fathers were angry when such children were excluded from school." Another from one of our larger towns reports poor school conditions, "and Scarlet Fever year after year." Another, "Our school has been closed for Diphtheria two weeks, by order of the Board of Health." Another, "Diphtheria was prevalent in one room in the fall of 1888, and was probably caused by open catch basins."

Is it not time that all our schools had regulations controlling this matter? Fond du Lac sends a copy of their health permit as follows:

"The bearer, _____, has fully recovered from _____, and all proper precaution has been taken for disinfecting of clothing, bedding and premises. The attendance at school of this child, or members of same family, will be without danger to other attendants at the school.

_____, Attending Physician.
_____, City Superintendent."

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Then follows a list of the contagious diseases, eleven in number.

Other towns also, in marked contrast to the negligence to which I have directed attention, are careful and thorough in protective measures against disease, one principal reports, "Our school ground contains two acres, well fenced, shaded and cared for, ventilation a success; excreta disposed of by the dry air system, a thorough success. The well is 200 feet from anything that could contaminate. Pupils in whose families contagious diseases exist are excluded till they bring a certificate of safety from the attending physician. Typhoid Fever has not been prevalent."

Another principal in a large school reports, "Floor space to each pupil, 25 sq. ft., air space, 335 cu. ft. Heating by furnaces with electric regulator. Excreta disposed of by a dry closet system, which is satisfactory and inoffensive; water from artesian wells, no Typhoid Fever or contagious diseases."

Another reports, "Seven years ago we had a severe run of Diphtheria; since then our sanitary condition has been much improved. We keep our cellars and entire building clean, and see constantly to the purity of the air. One building we heat by hot water, which is incomparably superior to stoves or hot air furnaces."

These instances are merely samples of the sanitary improvements and care manifested in many of our best schools, and the freedom from disease in such places is very marked, but the quotations we have made from places where such care has not been manifested, impress on us the importance of having children afflicted with contagious or infectious diseases, or those who may have come in contact with such diseases at their homes, excluded from school or other public places until all danger that they may communicate such diseases has passed.

One city has wisely adopted the following rules with ref-

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erence to this subject, which we think ought to prevail throughout the state: •

Rule 1. No person infected with any contagious or infectious disease, dangerous to public health, shall be admitted into any public or private school within the jurisdiction of this board.

Rule 2. No parent, guardian, tutor or other person having charge or control of any child or children shall allow or permit any such child or children to go from any building infected with scarlet fever, diphtheria, cholera, small pox, or other contagious or infectious disease, dangerous to public health, to attend any public or private school within the jurisdiction of this board.

Rule 3. No parent, guardian, tutor or other person within the jurisdiction of this board having charge or control of any child or children shall allow or permit such child or children to go from any house or building infected with scarlet fever, diphtheria, cholera, small pox or other contagious or infectious disease, to attend any public school, church, or place of amusement, or to travel in any public vehicle.

Rule. 4. No person within the jurisdiction of this board shall be allowed or permitted to go from any house or building infected with scarlet fever diphtheria, cholera, small pox or other contagious diseases dangerous to the public health, to attend any public school, church or place of amusement, or to travel in any public vehicle.

QUESTION 17. TYPHOID FEVER.

This is very closely related to the previous question, and what has been said of contagious diseases is in a large measure applicable to this.

The table shows typhoid fever prevalent in 21 of the communities reported; in 24 per cent. of these it was thought to be traced to the use of impure water.

The following are some of the testimonials which throw

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light upon this subject: "Much typhoid fever resulting from impure water." "Poor water, poor ventilation, poor privies; much typhoid fever prevalent." "Scarlet fever, diphtheria and typhoid fever prevalent, probably from impure water, low wet ground and poor ventilation." "Typhoid fever from bad water; privies never disinfected or emptied." "Typhoid fever prevalent; thought to be owing to impure water in town." "Typhoid fever in one family traced to impure family well." "Typhoid fever has been in the community, probably caused by drain from kitchen being close to well."

"Typhoid fever prevalent; physician said he thought it was caused largely from filthy wells." The defects of this school are spoken of as no ventilation except windows and transom, privies very offensive—never disinfected or emptied, poor drainage, water obtained from neighbors' wells which are all quite near to barns, 30 to 50 ft. "Typhoid fever prevalent to an alarming extent in our village last summer, caused no doubt by the impure water used." Defects mentioned are poor ventilation and offensive privy vaults. "Typhoid fever prevalent; don't know the cause; doctors can't tell," and yet this teacher has reported the cubic feet of air space as 60, grounds small, not fenced or well cared for; privies with vaults three feet deep, never emptied, and offensive; ventilation most unsatisfactory, water poor, 300 ft. from cemetery and 20 from outhouse and barn, and although this school well is not used, their "water pronounced by those who have examined it as not the best."

Contrast these reports with the almost entire absence of typhoid fever and contagious diseases where sanitary conditions exist, and who can fail to see the responsibility of school boards and the sin of negligence in these matters.

QUESTION 18. EXAMINATION OF SCHOOL PREMISES WITH REFERENCE TO SANITARY CONDITIONS.

Our table shows that in only 14 per cent. of the small number of schools reporting on this subject, has there been

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any examination by a physician or a member of a board of health, and in only 24 per cent. by any other means, which generally refers to teacher, sometimes a member of the school board. It is fair to suppose that the other schools would have reported if examination had been made, in which case the per cent. by physician would be reduced to nine.

This negligence is particularly made emphatic when almost universally in the places where sanitary conditions are poor and fevers and contagious diseases are prevalent this question is answered, "No examination." It is where the conditions are good that examinations are made. For example, one says, "No arrangement for ventilation; privies offensive, not cared for by school board; well 60 ft. from privy, 70 from stable and 50 from barnyard; probably has never been analyzed; typhoid fever prevalent; the building has not been examined." Another, with similar unsanitary conditions and fever, whose well is in a barnyard surrounded by cesspools, says, "The building has not been examined in particular, but walls were whitewashed and floors cleaned last August. The school ground much needs to be fenced so as to free us at least from cattle in the summer."

Another says, "Our ventilation is very bad. Good remedies have been suggested, yet the board does not comply with them. The privies are not well cared for; water is not fit for use; some windows should be curtained; the primary department is too crowded; examination has been made by no one to my knowledge."

Many teachers complain that they cannot get the school board to visit their schools or attend to things needed.

QUESTION 19. IMPROVEMENTS.

The 342 schools report 72 improvements the past year. Eight new school-houses have been built, eleven have improved their means of ventilation, three having introduced

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good ventilating systems; ten have secured better privies. It is hoped that this report may awaken our school boards to many more improvements during the year to come.

QUESTION 20. DEFECTS.

Many teachers have failed to report upon this question, but so far as given they aggregate 342. Inadequate ventilation heads the list with 142. Offensive privies, 94. Bad light, 51. Overcrowded rooms, 46. Poor heating arrangements, 38. Poor water, 21; and a long list of minor defects follow. A category which ought to lead each officer and patron of our schools to ask, how far am I responsible?

The "additional information" called forth by question 21 has mostly been incorporated in other parts of this report. I will only add one statement which shows the difficulties under which some teachers have to struggle in endeavoring to instruct and help those who are soon to bear the responsibilities of citizens. After describing a school with sanitary conditions by no means good, he says:

"The average citizens are negligent or prejudiced against school work, and were it not for the female vote the 100 pupils, more or less, of this district would be crowded into one room under the instruction of a third-class teacher. Among the pupils are some possessed of natural ability, who under proper instructions might in time rise to honorable station, but they are compelled to struggle along in the face of difficulties which seem to me as a teacher to be formidable, to the proper developement of character and intellect. In this village are men of misgotten influence, who are prejudiced and arrayed against educational enterprise and who have succeeded to an alarming extent in moulding public opinion to their taste, against the best interests and pressing needs of the rising generation."

Does it seem possible that in the intelligent state of Wisconsin, noted for its educational facilities, such a letter could have been written? Let each one who reads this ar-

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ticle endeavor to correct the evils within his reach, that the "dead flies in the ointment of the apothecary" may be removed, and the schools of Wisconsin send forth only a "sweet smelling savor."

In conclusion we advise that the following important recommendations be consigned to the county superintendents of the state, who are urged to present them to the attention of every school district board, to the end that our schools be placed in good sanitary condition:

Rule 1. To clean and perfect all sources of water supply, and where schools have no water supply of their own, to furnish such.

Rule 2. In the absence of a better system, to prepare the windows and transoms, so that ventilation can be had without causing drafts, and that all schools introduce improved ventilating systems as soon as possible.

Rule 3. To place buildings in good repair, with tight floors, good roofs and underpinnings.

Rule 4. To see that the grounds do not permit standing water, and to prepare gravel or board walks to keep the children's feet out of the mud.

Rule 5. Suitable water closets for each of the sexes should be provided with every school-house. They should be situated far enough away to secure privacy, be kept in good repair and cleaned and disinfected at least twice a month.

Rule 6. The rooms should be so warmed as to maintain an even temperature, and all be kept comfortable; stoves and furnaces should be safe and in good order.

Rule 7. Rooms should not be overcrowded; not less than 15 sq. ft. of floor space and 215 cu. ft. of air space should ever be allowed to each pupil.

Rule 8. Blackboards should not be placed between windows; the surface should be dead black, not glossy.

Rule 9. The light should, if possible, be admitted from

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the rear, or rear and left of the pupil — never from the front.

Rule 10. Desks and seats of different heights should be furnished to suit the size and age of pupils.

The author desires to acknowledge valuable help in the preparing of this report, and to express heartfelt gratitude for the same to the officers and teachers of public schools, who have so promptly and efficiently filled out and returned their reports, often furnishing important suggestions.

To the Hon. J. B. Thayer, state superitendent, for valuable assistance rendered. To Dr. J. T. Reeve, Sec. of State Board of Health, and to the Rev. A. L. P. Loomis, who has largely assisted in tabulating and preparing this report.

Some Means of Health in School-Houses.

SOME MEANS OF HEALTH IN SCHOOL-HOUSES.

BY HON. W. D. PARKER.

The sanitation of schools must keep pace with the literary instruction, and it is the purpose of this paper to call attention to some defects and remedies in warming and ventilating school-houses and in placing and managing out-houses.

Of something more than 200 school-houses inspected during the past year, 38 were found with adequate means for warming and ventilation; the others varied from construction that admits of suitable aerification, to the houses or rooms that are ceiled so that no change of air is practicable, and the most surprising structure seen was a house having a furnace of large capacity with no exits for vitiated air.

Observation shows that no warming and airing that depend upon the teacher are efficient for a school-house, whatever the theoretic bias of the teacher towards ample ventilation may be. The very nature of the teacher's duty precludes proper care for fires, and for so much circulation of air as is essential for respiration in the school-house. Observation also shows that no school-house that is properly constructed for use in all seasons, admits of the use of a simple stove for purposes of warming or ventilation, and the extreme of error in this direction was noted in a room occupied by more than 60 persons, in which a four inch pipe was the sole means of delivering air for respiration, and no exits whatever, completed the air circuit.

The following cut shows the characteristic evils of school-house stoves, better than a verbal description. Temperature near the stove, 90°; 20 feet away, 50°; at floor, 40°; at ceiling, 100°:



GET THE BEST. WHY STAY BEHIND THE TIMES!



Fig. 1.

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The variation of temperature near the stove, and at points removed from it, exhibits the crudity of the whole process of stove heat as related to comfort, and inferentially to respiration. This paper, therefore, suggests no remedy for stove-heated school-houses. There are methods of organizing heating and ventilating apparatus, having regard to economy and facility, that are already built into structures in the state, and they show the following important characteristics in construction, and they admit of adaptation to buildings already erected, and should not fail of consideration by those persons who have to do with the original construction of school-houses, churches, town and concert halls, theaters, and other audience rooms:

1. Each room, and each main corridor, ante-room, vestibule, and main stairway in any structure designed for housing numbers of people in limited space, should be considered as a link in a chain of conductors, through which so much air, warmed to a temperature of 70 degrees, should be passed, without exposing the persons to appreciable currents, as will supply each person the maximum needs for airing the blood and the clothing.

2. There should be placed in the basement of this building means of warming the amount of air in the aggregate that is implied in specification 1, without exposing the air for this purpose to a warmer surface which is heated to excess; and it is believed that this part of the apparatus is operated as a *furnace* with greater economy than in any other way, and that in the expense of the plant itself and of its maintenance for years, as well as of its operation, economy will result under like circumstances.

3. Bearing in mind that the air is to be conducted from the general atmosphere through the warming apparatus already alluded to, and moved through all the rooms specified, and delivered back into the atmosphere, all experience shows that there is no danger in providing conductors of too great capacity, and the only *contraction* that can be

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permitted is in the jacketing of the primary heating surface during the short transit of the air — all ducts leading to the furnace and away from it, must have the greatest practicable capacity and the most direct connections, free from unnecessary turns throughout the house. It may be stated in a general way that the air circulating from the general atmosphere to the furnace and from the rooms occupied by persons to the point in the circuit at which special means are applied for lifting it out of the house, the current should be considered as *descending*, as may be supposed from a falling temperature; and in all other places in the circuit, the conductors should be arranged for *ascending* currents, as may be inferred from rising temperature.

4. Real comprehension of this system of air warming and circulation will suggest at once the necessity of a well built house, having windows and doors that may be shut next to air-tight, and so maintained whenever the perfection of the ventilation is involved; and in Wisconsin climate, for most efficient service during winter months, and therefore for the entire year practically, the house should be provided with ample vestibules, or storm-houses over outside doors, and it is believed to be true economy to glaze with double sash the windows on the most exposed sides of the house.

5. No effort should be made to deceive one's self into the belief that this or any other respectable system can supply the amount of air necessary for healthful respiration, without the expenditure of more fuel than would be required by the barbarian's means of warming by stoves placed in the rooms, and the expense incident to original structure and to the operation of this apparatus, will necessarily be greater than the expense for little or no apparatus.

The following diagram shows sufficient details to enable the reader to understand the organization outlined above, and any person desiring to prosecute the inquiry can do so by studying the processes in actual operation in the new

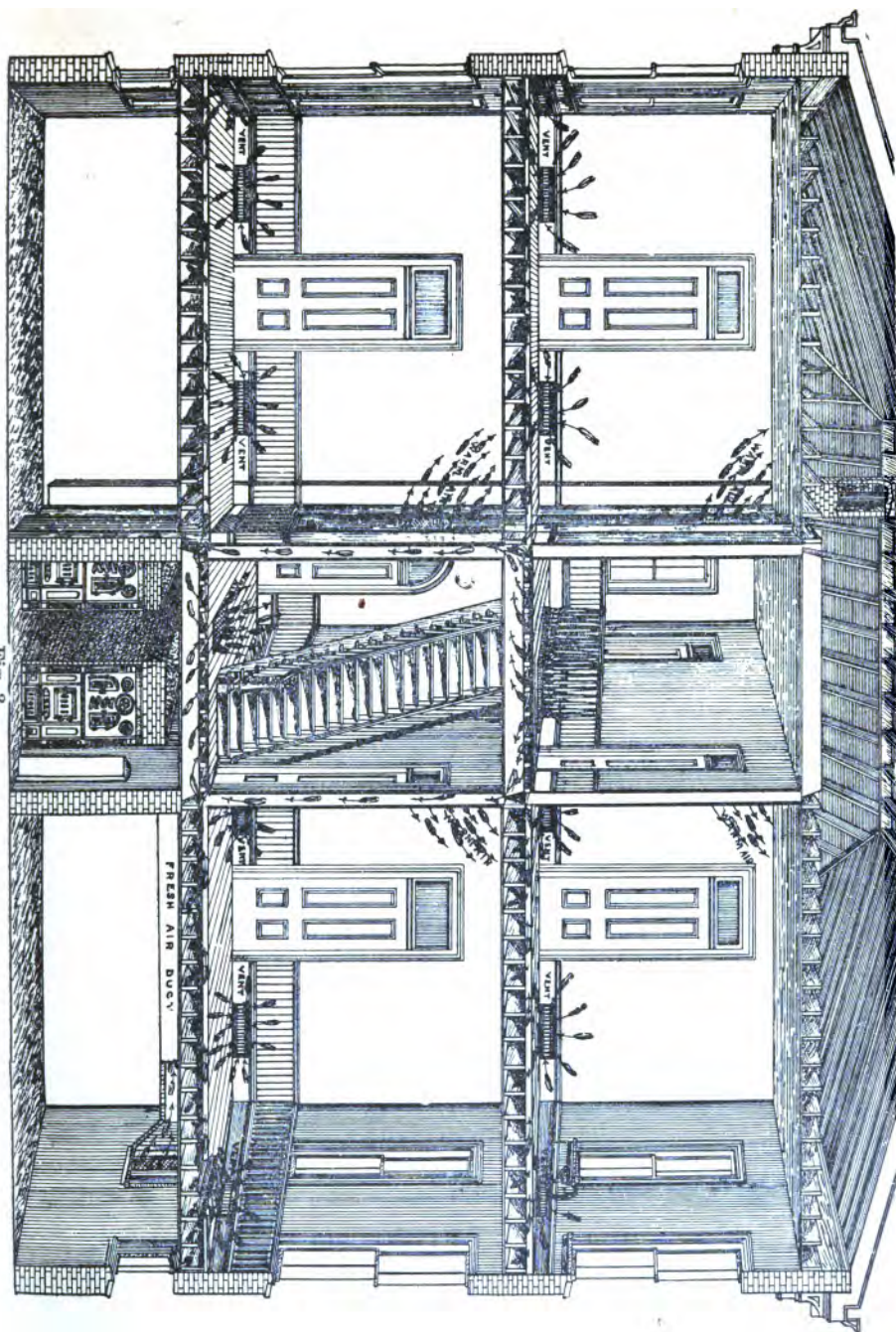


Fig. 8.

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school buildings at places enumerated at the end of this article:

A special inspection of school-house closets, made during the past year, revealed a state of affairs that is not only shocking to decency and demoralizing to youth, but the isolation and the vileness of many closets are believed to be detrimental to women and girls, and to sensitive boys, in ways that result in ill health, and later, in permanent organic disease. Without further allusion to details that are well known to physicians and to others who study sanitary questions, it may be stated that nearly half of one hundred and twenty closets inspected were found in repulsive condition, and remonstrance against the continuance of the concentrated vileness and indecent exposure observed in the other half, made to proper officers in private, usually effected remedies, but they were necessarily temporary just as evanescent effort against obscure evils ever fails to accomplish permanent reforms.

One or more of the following named conditions usually exaggerates the inherent evils of an ordinary vaulted privy; exclusive use by children without teachers' oversight, or, in country, frequent use by passers-by; use for play purposes, misuse on account of ill construction, remoteness from domicile, or contiguity to buildings or to other out buildings, and (it is believed that) the out-in-the-lot privy will ever remain a menace to health, to morals, and to decencies, that will deter thoughtful parents from exposing children not only as related, but to the entailments of bodily ills engendered thereby.

The unfortunate characteristic of this matter is exhibited in the need of frequent personal attention, given by a person of refined sense, in directing the purification of closets as ordinarily constructed, and hence the reform may be expected to come only when supervision shall be given by teachers through a demand made by public sentiment; and, therefore, every patron of a school should

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inform himself of the condition of out-buildings to the same degree of certainty that he learns of the moral quality of the teacher, before trusting his child to the influences; and discovery of such things as have come to light should result in inviting school boards to remedy all things up to an innocuous state for child and adult.

But application of forces already in operation in some school-houses, yields results far beyond the efficiency and range of any personal attention, even when continuously given, and reference is made to intelligent application of automatic devices whose performance excels human attention in celerity, efficiency, and certainty of action. Allusion is intended to what is known as the "Dry Air Closet" system, wherein the great volume of air that is vitiated by respiration and is exhausted from school rooms, is conducted through the vault and thus perfectly desiccates the solids — in some dry systems a special air warming apparatus secures a like result and avoids the possible re-flow of air from the vault to the school room.

To afford a basis of understanding of the Dry Closet, reference may be made to a previous statement in this paper relating to ventilation, wherein it is necessary to conceive ample closets constructed in the school building basement, the vault constituting a part of the duct for exhaust air, thus insuring exposure of the urine and fecal matter to a very large volume of warm air that at once absorbs the liquid, so the residue — an insignificant amount of inoffensive, odorless solid — can be removed by shoveling, and in some structures of closets may be burned in position.

The following cut of the air circuit section cited will help the reader:

The results of use of these Dry Closets are so surprising that, when originally communicated, disbelief provoked examination at once, and as a crucial test, a dry-air-closeted school building, that had housed from 300 to 400 pupils during thirteen school months, was inspected, and no odors

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could be detected in the vault, above or below it, whereas like use of the ordinary privy would have rendered the premises uninhabitable.

There are many school-houses in Wisconsin and neighboring states now fitted with Dry Closets, and under invitation of the writer, testimony of their use has uniformly confirmed the following particulars, and a school superintendent in a large city, using twenty-five Dry Closets in as many school buildings that house an aggregate of 6,000 pupils, writes words of praise only:

THE DRY AIR CLOSET.

1. Is efficient up to claims of its advocates, doing its service automatically, inoffensively, and perfectly to the end in view.

2. It is cheaper in construction, more economic in operation than other closets, and in use, is wholly without offense to manager and scavenger.

3. Is sufficiently under control of teacher and janitor, and is therefore free from defacement and depredation, and its convenience, warmth, accessibility and atmosphere, invite to freer use than other closets.

The Dry Air closet is applied by experts, and uniform success, therefore, attends its construction.

For convenience of those who may wish to see this sanitary appliance in actual operation, it may be stated that public school buildings at the following named places in Wisconsin are already fitted with it:

Alma, Argyle, Elkhorn, Ft. Atkinson, Ft. Howard, Hudson, La Crosse, Lodi, Merrill, New Richmond, Neenah, Oshkosh Normal and First Ward School, Prescott, Shawano, Waukesha, and others.

Our Insane.

OUR INSANE.

BY DR. S. B. BUCKMASTER,

Late Superintendent of the State Hospital for the Insane, Mendota, Wis.

As far back into the past as we can trace the history of man we find that he has been the victim of mental aberration. The ancient Egyptians, Greeks, Romans, Hebrews and the oriental nations were all familiar with insanity, and Hippocrates, Galen, Celsus and others of the physicians of that far away time wrote intelligently concerning this dreadful malady. The Egyptians kindly cared for their insane in their sacred temples, and the Greeks established for them temples of health, or *asclepia*, in charge of which were the priest-physicians, or *asclepiadie*, the reputed descendants of *Æsculapius*, the fabulous god of medicine.

The insane were kindly cared for by these ancient nations, but during the middle ages when Europe was under the dark cloud of superstition, the mind deranged was not recognized, the unfortunate insane being supposed to be possessed by devils, or to be witches, and dreadful was the suffering of thousands of the insane. For hundreds of years this cruel and inhuman treatment of the insane by both ecclesiastical and legal authorities continued, and only within a century has their condition been ameliorated. During the great French revolution, less than a century ago, when the streets of Paris were dyed with the blood of her best citizens and the sentiments of humanity seemed to have been displaced by the instincts of wild beasts in the breasts of the masses, when the women of that fair city entertained themselves by sitting down with their knitting in the *Place de la Concorde* watching the deadly work of

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the guillotine, there was one man in France whose gentle thoughts turned toward the unfortunate insane, and in 1792 Dr. Pinel entered the great asylum for the insane at Paris, the Becetre, as its superintendent, and with him, says his biographer, Pariset, entered "pity, goodness and justice."

Up to this time the condition of the inmates (which was only similar to that existing elsewhere) was most pitiable. They were scourged, loaded with chains, unclad and poorly fed, and waited upon by attendants selected from the malefactors of the prisons, who were armed with heavy whips and frequently accompanied by savage dogs. Dr. Pinel entered this place with discouragements from the authorities, and in great danger of losing his life from the wretched, infuriated inmates, and in almost equal danger from the mad populace without, who once attempted to hang him for taking the chains off the insane with evil designs against the state. With sublime heroism he began removing the irons, introducing kind treatment, and thus established a new era in the treatment of the insane, which has made his name immortal.

Is it not startling to the general reader when the fact is first presented that we have an army of one hundred thousand insane persons in the United States? Our own state of Wisconsin furnishes three thousand of this army. For every one undoubtedly insane there is probably another who lives so near the indeterminate border line between sanity and insanity that he sometimes crosses over the line into the broad field of mental alienation.

That insanity is increasing at a greater ratio than our population seems to be established, though the greater care with which our census statistics are compiled, together with the fact that the duration of life is prolonged among the insane by better care, and also the committal of cases that were formerly kept at home, makes this increase more apparent than real. The fact remains, however, that after

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allowing for all former delinquencies in compiling statistics, there is an absolute increase in insanity. Dr. Wilkins, superintendent of the Napa hospital for the insane, estimates that if the present rate of increase should continue in California, one out of every three in the population of that state will be insane in one hundred and twenty-five years.

While insanity is thus increasing out of proportion to our increase in population, it does not appear to be so amenable to treatment as formerly, and thus the chronic insane are accumulating at an alarming rate, and the problem of their care, together with the care of all the other defective classes, becomes a serious one to our commonwealths. In 1860 the English lunacy commissioners reported 38,053 persons of unsound minds in England and Wales. In 1880 they reported 71,191, an increase of 87 per cent. in 20 years, the sane population having increased but 39 per cent. during the same period. In Great Britain (including Ireland) there was in 1880, 1 insane in every 374, in Germany, 1 in every 418, while in the United States the proportion is about 1 in every 600. In the states of Ohio, Wisconsin, Pennsylvania, Michigan, Massachusetts, New York and Illinois the sane population increased 30 per cent. in the fifteen years from 1870 to 1885, while the insane population increased over 100 per cent. during the same time, or more than doubled.

It is a difficult matter to get sufficiently reliable statistics to institute comparisons between the different races of men as to the frequency of insanity. It is a disease of civilization. This does not necessarily imply that only the more intelligent persons become insane, for it attacks all ranks and conditions of life.

The history of the world has undoubtedly been influenced by the acts of some of the many insane monarchs who have ruled the nations.

It is very prevalent among the lower orders whose wants

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are intensified by civilization, and whose manner of living, poor food, bad hygienic surroundings, with a hundred other causes, all tend to break them down physically and mentally. We do not hear of much insanity among savage nations for the reason that their defectives are either disposed of at once, or die from neglect, and thus do not grow up and accumulate. It is only among civilized nations that the defectives are kindly cared for, and in so many instances permitted to marry and increase and multiply, and thus by heredity alone, furnish the principal cause of alienation.

In the United States the foreign born population furnish a larger percentage in ratio to their numbers, than the native born. Of the 531 patients in the Wisconsin State Hospital for the Insane, on the 1st of October, 1886, 265 were foreign born, 83 children of foreign born parents, and 183 native born Americans. The population of Wisconsin in 1885 was 1,563,413, of whom less than one-third — 493,990 — were foreign born.

With the pronounced symptoms of insanity all are sufficiently familiar. It is well to remember that the cases of maniacal excitement are few as compared to the mass of the cases, and as early treatment is imperative, if recovery is to follow, the slightest symptoms should be observed. There is usually a change in the character of the individual. The pleasant, agreeable person may become melancholy and depressed, or he may become morose and accuse his best friends of being his enemies. The insane person is usually not in accord with his surroundings. He may be very poor, but will insist that he has great wealth, that he dwells in a palace, etc. Symptoms may exist for some time without the relatives realizing that it is insanity, but when the fact is recognized, the afflicted one should be sent to a hospital for the insane, as early as possible, for treatment.

The hospitals are established for the purpose of caring

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for such cases, who, as a rule, are much better when removed from the home surroundings. At home patients make little effort of the will, and their relatives, in their anxiety and perplexity, frequently assume an attitude of concession, and often downright lying, that intensifies the disease, and like a spoiled child, the patient steadily grows worse. In the hospital the patient realizes that he is but one among a number who obey regular rules, whose habits, diet, exercise, bathing, etc, are regularly prescribed, and there is a discipline, without harshness, with which he at once conforms, and thus becomes a quiet, orderly patient, though he may have been very troublesome at home.

This brings me to the question of prejudice against hospitals for the insane. That there is sometimes harshness and occasional cases of ill-treatment, is not to be denied. Let it be remembered, however, that the great majority of the tales regarding such institutions are originated by discharged employees, who, out of revenge, or to justify themselves to their friends, start these stories, which are magnified and circulated by sensational, irresponsible newspapers, and thus irreparable harm is frequently done, not to the officers of the institution particularly, but to hundreds of our unfortunate insane, who if treated early might recover, but are not committed because of the prejudice engendered by these reports. They who aid in circulating these tales do a great injury to many. Insane persons frequently accuse their best friends of abusing them. It is one of the most common characteristics of insanity, and one of its most distressing features, that the insane turn bitterly against their nearest and dearest.

They also have delusions about being abused in hospitals, and even after they recover they sometimes remember these delusions, not as delusions, but as actual occurrences.

A few months ago a member of the state board was passing through the wards with me when we were approached by a patient who vehemently detailed how he had been

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choked by an attendant. The member of the board looked grave, and I thought it a case for me to investigate, when the patient continued, shaking his fist under the member's nose, "And you too pounded me on the head with a club the last time you were here." Very few insane persons realize their condition, and indignantly repudiate the idea that their minds are affected. With this belief that they are well, they naturally enough resent being deprived of their liberty, and if obliged to do as the rules and regulations require, they think themselves abused. After an experience of ten years in a hospital for the insane it is my opinion that patients are oftener abused outside of the hospital than in it. So often friends do not realize that a person is insane, and think his conduct the result of perverseness, and many a poor, bruised patient is brought to us whose friends and relatives have not properly cared for him. Naturally enough these people are suspicious that the patient will also be abused in the hospital, it being one of the failings of human nature to suspect others of doing what we ourselves have done.

For over three years manual restraint has not been necessary among our hundreds of insane, yet almost daily patients are brought to us by their friends or others, loaded with irons, or strapped hand and foot and covered with bruises, to say nothing of their filthy, vermin infected condition. If patients were so treated in the hospital there would be a universal howl of indignation. Some time ago we received a female patient, filthy, infected with vermin and covered with bruises, who had been chained to a staple in the floor for six months, because her mother feared she would not be kindly treated at the hospital! And such cases are far from being rare.

Let me beg of my readers who may have insane relatives to send them to a hospital as early as possible for treatment. Of those cases of insanity committed to the hospital where the disease has existed three months or less, almost

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one-half recover perfectly, and many of the remainder improve, while in those cases where the disease has existed a year or more, even in the mildest form, the number of recoveries are very small.

It thus follows that there are hundreds of chronic insane who will always remain a charge upon their relatives or the state, because they were kept at home through the mistaken kindness or the prejudice of their friends, until the favorable time for treatment was passed. Is it not a fearful thing to deprive a relative of the right to treatment for a malady that his defective judgment does not permit him to recognize and thus demand treatment for himself? Do not, therefore, let prejudice, founded on unauthenticated rumors, prevent an afflicted friend from having the treatment to which he is entitled, and which may restore him to health and to his family, instead of becoming a hopeless, helpless chronic case. It is but fair to assume that governing boards are anxious to select officers for the management of charitable institutions who are qualified by experience and human feelings for the position. The superintendent, with great responsibilities upon him, has a natural desire to make his administration a creditable one, and therefore uses his best judgment in selecting subordinates. The physicians and supervisors are passing through the wards almost hourly, every complaint is investigated, and attendants realizing this, and with a heavy penalty fixed by law for abusing a patient (in Wisconsin \$200 fine or a year's imprisonment), even if they felt inclined to abuse, will be very careful how they treat the unfortunates in their care.

Patients may sometimes be handled rougher than necessary, but such cases are the exceptions and not the rule, and it is my belief that the majority of patients in the hospitals for insane are better cared for, having better food, better hygienic and other surroundings than they ever had outside.

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In bringing patients to the hospital let no deception be used. So often patients are brought under false pretenses. They are told that the hospital is a hotel, that they are not to remain, or any other lie that may occur to the relatives or the party bringing them. Consider a moment what the shock must be when they find where they are and how they have been deceived. I will not permit patients to enter our wards until they have been fully informed by those bringing them, just where they are and why sent. If I did so the patients would think that they had been kidnapped, that their friends had also been locked up, etc. Years ago I saw cases sent to the wards without their knowing where they were. The resulting shock when the realization came to them was pitiable. Many times they refused to believe the physicians, saying they knew their friends would not so deceive them, would not take their medicine, etc. Even when such patients recover they frequently say that they can never forgive their friends for the deception practiced. Far better tell them where they are going, and why, and if they refuse to go have the proper officer take them.

If to any of my readers some of my views seem too pronounced, let my earnest desire to benefit the unfortunate insane plead my excuse. If, by so presenting them, I can persuade the friends of even one person who becomes insane to have him committed early for that treatment to which he is entitled, and which his condition demands, and thus restore to him that which is of more value than life itself—his reason—I shall feel fully repaid for this article.

Leprosy.

LEPROSY.

The contagiousness of leprosy, the extent of its prevalence and the probability of its extension in this country formed one of the most interesting subjects of discussion at the meeting of the National Conference of State Boards of Health held in Nashville in May last, two members of a special committee, appointed for its study, having presented quite conflicting reports concerning the probable danger therefrom.

In view of the fact that a few cases of this disease exist in Wisconsin and other Northwestern states, the following extracts from the reports referred to are of special interest:

Dr. Benjamin Lee, of Pennsylvania, the chairman of the committee, who believes that there is very great danger of the spread of this disease in the United States, gave in his report a very interesting history of its prevalence in various foreign countries, and referred to its existence in several places in the United States, expressing his belief of the danger therefrom in the following terms:

"We have a few centers of infection within our borders. These, however, are as yet insignificant. If proper precautions are taken, they will cease to exist in the course of a generation. In view of the situation, what is the part of wisdom? Two courses are open to us. First, the do-nothing policy which has prevailed until nearly the present time. The result of this will be that in fifty years there will be lepers in every hamlet and leper houses crowded with their mutilated victims in every city. Second, the policy of absolute and implacable segregation in the case of those who are already fairly domiciled in the country, the prohibition

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of marriage to all lepers, and the prohibition to all uninfected persons of the inhabiting of infected houses; and with regard to foreign lepers, the policy of absolute and implacable exclusion. With the adoption of these measures which undertaken at this time, will entail very little hardship and will not be difficult of execution, there are those now living who will see the day when there shall not be a leper in the land. How shall the principle of segregation be practically carried out? Those who have given the subject the most careful study believe that careful investigation would bring to light lepers hiding in every state in the Union. Shall every state then establish a leper house? Common sense cries out against such an absurdity. Shall each state set apart a leper ward in a general hospital? Humanity forbids the incurring of such a risk. One, or at least two colonies, would accommodate all the lepers on the east side of the Rocky Mountains, and the same number would be sufficient for those on the other side. Such a colony already exists in Louisiana. There are lepers enough in Wisconsin and Minnesota to warrant the establishment of one in that section of the country. Let those states deed the land occupied by these leprous communities, or which may be set apart for them, to the United States and let every leper, no matter what his wealth, or his social position, be removed to one of these colonies. Let every provision be made for the care and comfort of the colonists, but let the separation of the sexes be absolute during the genetic period of life. To every house in which lepers have lived, which is not within the limits of the colony, let the torch be applied; or should this be impossible, let the most thorough disinfectant be employed, not forgetting the Mosaic precaution of scraping the walls."

Dr. Knut Hoegh, of Minnesota, on the other hand, after also reviewing the history of this disease in other countries, spoke of its existence and history in the United States as follows:

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"While it is admitted that leprosy is a contagious disease, the danger of contagion is very much exaggerated, and we shall in all probability be able to exterminate the disease in the United States, without having recourse to measures which are unnecessarily severe, and which disregard the ordinary rights of the diseased individuals. * * *

In regard to the history of leprosy in the Northwestern States, the writer is tolerably well familiar with it. Through circulars sent to ministers, merchants, physicians, and other prominent men among the Scandinavians, nearly every case that has been known and recognized was investigated. Since the beginning of the Scandinavian emigration, probably less than two hundred lepers have come to this country — less than twenty live to-day — spread through the Northwestern States. Not one of the now living known lepers was born in the United States. The children and grandchildren of deceased lepers, of whom many now live amongst us, have remained free from the disease, which has never appeared in any of them. No instance is recorded or known where any native of this country has been contaminated by any of these immigrants. In view of these facts it does not seem permissible to indulge in the alarming view of those who believe if we do nothing "in fifty years there will be lepers in every hamlet, and leper houses, crowded with their mutilated victims in every city." In the present state of civilization in the northern part of the United States it seems as if the disease does not find those special conditions which it requires for its extension, and with the most ordinary care it ought to be possible to stamp it out, not only in the solitary instances where it is found in the Northwest, but also in California and the South.

In accordance with the views above given, the following practical recommendations are respectfully submitted:

"1st. Leprosy immigrants should not be allowed to become domiciled in the United States, but be sent back to their respective countries. With the closure of our ports to the

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immigration of the Chinese, the danger of the importation of the disease from China has ceased. As the Norwegian government has very accurate information about its lepers, it will be an easy matter to guard against the introduction of leprosy from Norway, as the Norwegian government probably will give its willing co-operation. As long as there are reported no cases of leprosy imported from the West Indies, it does not seem necessary to organize any board for the personal inspection of the immigrants we may receive from those countries.

2d. The lepers that we have the misfortune to have among us should be under the control of the sanitary authorities to this extent, that no leper should be allowed to sleep in the same room, far less in the same bed, with a healthy person. He should have his separate clothes, towels, bedding, dishes and other eating utensils. He should not be allowed to enter public halls, churches, theaters, schools, and similar places where people congregate promiscuously. Nor should he be allowed to use public beds in hotels, sleeping cars or steamers. He should not be allowed to travel from his home except under permits from the sanitary authorities. It should be the duty of every physician who becomes aware of the existence of a case of leprosy, to report it immediately to the proper sanitary authorities. The families of lepers, or others who have been in contact with them, should be examined once every year by a competent physician, under the orders of the sanitary authorities, with a view of the early detection of new cases."

The views, both of the contagiousness of leprosy and of the measures that should be taken to prevent its spread in this country, as presented by Dr. Hoegh, are in entire harmony with those of the Wisconsin State Board of Health, of which Dr. Hoegh was formerly a member; but while it is certain that far more lepers have come to Wisconsin than now exist in it, and that the number of cases is constantly

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diminishing, such a discussion of the subject as that to which we have referred, cannot fail to be productive of good results by securing a better knowledge of the nature of leprosy, and by leading to a more intelligent sentiment in reference to the care and treatment of its unfortunate victims. The following resolution, offered by Dr. Lee in reference thereto, was adopted by the conference:

Resolved, That it is the sense of this Conference that all state and local Boards of Health should keep all cases of leprosy existing in their respective districts under surveillance, and should require physicians to report all cases of the disease which may come to their notice.

Destruction of Forests.

DESTRUCTION OF FORESTS.

Before the same conference another very interesting discussion was elicited by the reading of a paper by Dr. P. H. Bryce, of Toronto, Canada, on "Preservation of Forests as a Natural Sanitary Need," in which the direct protective influence of forests on human health and life was ably shown. The following resolution was subsequently adopted by the conference. It is especially commended to the people of Wisconsin, whose attention has not been sufficiently drawn to this subject, and whose forests are disappearing in many places far too rapidly for the health of the people.

Resolved, That recognizing the well-known evils resulting to the whole nation from the disastrous floods which within recent years have taken place along the valleys of our great rivers; and from the destructive cyclones which from time to time occur, both of which evils have been pointed out to be due mainly to the cutting down of the forests on the mountains and along the hillsides where our great rivers take their origin, and to the violence which the wind storms obtain blowing over great tracts of practically treeless prairie, this National Conference of Health Officers desires most earnestly to bring these evils to the attention of our Federal government, our state and provincial legislatures, and other scientific and commercial bodies, urging them to take such comprehensive action as will (1) cause a survey to be made of the gathering grounds of our great rivers. (2) Preserve, and replant when necessary, these areas, with protective forest trees. (3) Establish schools whereby the principles and practice of forestry will be taught, and protect by the most stringent legislation the results of the above-mentioned work. (4) Make recommendations to our towns and cities to form park associations for the planting of trees and obtaining possession of waste lands to be gradually reforested.

Laws Relating to the Public Health.

LAWS RELATING TO THE PUBLIC HEALTH

WHICH HAVE BEEN ENACTED SINCE THE PUBLICATION OF THE
LAST REPORT OF THIS BOARD.

A synopsis of the Public Health Laws of the State was published in the twelfth Report of this Board. For the convenience of Health Officers and others, having occasion to refer to them, the laws relating to the Public Health, which have been enacted since the date of that Report, are presented herewith as follows:

[Published April 6, 1889.]

CHAPTER 256.

AN ACT for regulating the methods of plumbing and house drainage in cities, villages and towns having a public system of water supply.

The people of the state of Wisconsin, represented in the senate and assembly, do enact as follows:

SECTION 1. Whenever in this state a system of water works or of public water supply has been or hereafter may be established in any city, village or town, the board of health of such city, village or town shall take immediate and entire control of all the plumbing and drainage or sewerage which shall thereafter be constructed or repaired in any building or place therein, with intent to connect the same with any public sewer; and no connection of drainage or sewerage with any public sewer shall be made thereafter by any person, without the consent of such board, and if made without such consent it may be broken and destroyed.

SECTION 2. The board of health may make and publish rules and regulations which shall specify the manner in which and the materials of which drains, soil pipes and fixtures designed to connect with or to be used in connection with the sewerage or water works of the city, village or town shall be constructed, and may fix suitable fines and penalties for violation of such rules, and the board may appoint one or more persons as inspectors of plumbing and drainage, fix their compensation, prescribe their

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duties, have full control of their official acts, and have power to remove them from office at pleasure, and the compensation of such inspector or inspectors shall be paid by the city council or village or town board.

SECTION 3. This act shall not apply to any city, village or town which has by charter or ordinance established a board or commissioner or other officers having especial supervision of plumbing, drainage and sewerage.

SECTION 4. This act shall take effect and be in force from and after its passage and publication.

Approved April 4, 1889.

[Published April 26, 1889.]

CHAPTER 452.

AN ACT to create the office of dairy and food commissioner, to prescribe his duties and to make an appropriation.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. The office of dairy and food commissioner for the state of Wisconsin is hereby created. Such commissioner shall be appointed by the governor, by and with the advice and consent of the senate, and his term of office shall be for two years from the date of his appointment, and until his successor is appointed and qualified; provided, that the term of office of the commissioner first appointed under this act shall expire on the first Monday in February, 1891, and vacancies occurring in the office for any cause shall be filled by appointment for the balance of the unexpired term. The salary of the commissioner shall be twenty-five hundred dollars per annum and his necessary and actual expenses incurred in the discharge of his official duties.

SECTION 2. Such commissioner may with the consent and advice of the governor appoint two assistants, each of acknowledged standing, ability and integrity, one of whom shall be an expert in the matter of dairy products and the other of whom shall be a practical analytical chemist. The salaries of such assistants shall not exceed eighteen hundred dollars each per annum and their necessary and actual expenses incurred in the discharge of their official duties.

SECTION 3. It shall be the duty of the commissioner to enforce all laws that now exist, or that may hereafter be enacted in this state regarding the production, manufacture or sale of dairy products, or the adulteration of any article of food or drink or of any drug; and personally or by his assistants to inspect any article of milk, butter, cheese, lard, syrup, coffee

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or tea, or other article of food or drink or drug, made or offered for sale within this state which he may suspect or have reason to believe to be impure, unhealthful, adulterated or counterfeit, and to prosecute, or cause to be prosecuted, any person or persons, firm or firms, corporation or corporations, engaged in the manufacture or sale of any adulterated or counterfeit article or articles of food or drink or drug, contrary to the laws of this state.

SECTION 4. Said commissioner or any assistant shall have power in the performance of his official duties to enter into any creamery, factory, store, salesroom or other place or building where he has reason to believe that any food or drink or drug is made, prepared, sold or offered for sale, and to open any cask, tub, package or receptacle of any kind containing, or supposed to contain, any such article, and to examine or cause to be examined and analyzed the contents thereof, and the commissioner or any of his assistants may seize or take any article of food or drink or drug for analysis, but if the person from whom such sample is taken shall request him to do so he shall at the same time, and in the presence of the person from whom such property is taken, securely seal up two samples of the article seized or taken, the one of which shall be for examination or analysis under the direction of the commissioner, and the other of which shall be delivered to the person from whom the article was taken, and any person who shall obstruct the commissioner or any of his assistants by refusing to allow him entrance to any place which he desires to enter in the discharge of his official duty, or who refuses to deliver to him a sample of any article of food or drink or drug made, sold, offered or exposed for sale by such person, when the same is requested and when the value thereof is tendered, shall be deemed guilty of a misdemeanor punishable by a fine of not exceeding twenty-five dollars for the first offense and not exceeding five hundred dollars or less than fifty dollars for each subsequent offense.

SECTION 5. It shall be the duty of the district attorney in any county of the state, when called upon by the commissioner or any of his assistants, to render any legal assistance in his power to execute the laws and to prosecute cases arising under the provisions of this act, and all fines and assessments collected in any prosecution begun or caused to be begun by said commissioner or his assistants, shall be paid into the state treasury.

SECTION 6. With the consent of the governor, the state board of health may submit to the commissioner, or to any of his assistants, samples of water or of food or drink or drugs, for examination or analysis, and receive special reports showing the results of such examination or analysis. And the governor may also authorize the commissioner or his assistants, when not otherwise employed in the duties of their offices, to render such

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assistance in the farmers' institutes, dairy and farmers' conventions, and the agricultural department of the university, as shall by the authorities be deemed advisable.

SECTION 7. The salaries of the commissioner and his assistants shall be paid out of the state treasury in the same manner as the salaries of other officers are paid, and their official expenses shall be paid at the end of each calendar month upon bills duly itemized and approved by the governor, and the amount necessary to pay such salaries and expenses is hereby appropriated annually.

SECTION 8. The commissioners may, under the direction of the governor, fit up a laboratory, with sufficient apparatus for making the analysis contemplated in this act, and for such purpose, the sum of fifteen hundred dollars, or so much thereof as may be necessary, is hereby appropriated, and for the purpose of providing materials, and for other necessary expenses connected with the making of such analysis, there is also hereby appropriated so much as may be necessary, not exceeding six hundred dollars annually. The appropriations provided for in this section shall be drawn from the state treasury upon the certificates of the governor.

SECTION 9. Said commissioner shall be furnished a suitable office in the capitol, at Madison, and shall make an annual report to the governor, which shall contain an itemized account of all expenses incurred and fines collected, with such statistics and other information as he may regard of value, and with the consent of the governor, not exceeding twenty thousand copies thereof, limited to three hundred pages, may be published annually, as other official reports are published, and of which five thousand copies shall be bound in cloth.

SECTION 10. All acts and parts of acts conflicting with this act are hereby repealed.

SECTION 11. This act shall take effect and be in force from and after its passage and publication.

Approved April 16, 1889.

[Published April 19, 1889.

CHAPTER 424.

AN ACT to prevent the manufacture and sale of fraudulent butter and cheese.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. No person shall manufacture, mix or compound with or add to natural milk, cream or butter any animal fats or animal or vegetable oils, nor shall he make or manufacture any oleogenous substance not pro-

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duced from milk or cream, with intent to sell the same for butter or cheese made from unadulterated milk or cream, or have the same in his possession or offer the same for sale with such intent, nor shall any article or substance or compound so made or produced be sold intentionally or otherwise as and for butter or cheese the product of the dairy. Whoever violates any of the provisions of this section shall be guilty of a misdemeanor, and be punished by a fine of not less than fifty dollars (\$50) nor more than five hundred dollars (\$500).

SECTION 2. All acts or parts of acts inconsistent with this act are hereby repealed.

SECTION 3. This act shall take effect and be in force from and after its passage and publication.

Approved April 16, 1889.

[Published April 22, 1889.]

CHAPTER 425.

AN ACT to establish a minimum standard for merchantable milk and to protect the purchasers and users of milk.

The people of the state of Wisconsin, represented in senate and assembly, do enact as follows:

SECTION 1. Any person who shall sell or offer for sale, or furnish or deliver, or have in his possession, with intent to sell or offer for sale or furnish or deliver to any creamery, cheese factory, corporation, person or persons whatsoever, as pure, wholesome and unskimmed, any unmerchantable, adulterated, impure or unwholesome milk, shall upon conviction thereof, be punished by a fine of not less than ten nor more than one hundred dollars for each and every offense.

SECTION 2. In all prosecutions or other proceedings under this or any law of this state relating to the sale or furnishing of milk, if it shall be proven that the milk sold or offered for sale, or furnished or delivered, or had in his possession with intent to sell or offer for sale, or to furnish or deliver as aforesaid, as pure, wholesome and unskimmed, contains less than three per centum of pure butter fat, when subjected to chemical analysis or other satisfactory test, or that it has been diluted or any part of its cream abstracted, or that it or any part of it was drawn from cows known to the person complained of to have been within fifteen days before or four days after parturition, or to have any diseases or ulcers or other running sores, then and in either case the said milk shall be held, deemed and adjudged to have been unmerchantable and adulterated, impure or unwholesome, as the case may be.

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SECTION 3. All acts and parts of acts conflicting with or contrary to the provisions of this act are hereby repealed.

SECTION 4. This act shall take effect and be in force from and after its passage and publication.

Approved April 16, 1889.

Chapter 344 of the laws of 1889, relates to the methods of proof in case of adulteration of milk and provides as follows:

SECTION 2. Proof of adulterations and skimming may be made with such standard tests and lactometers as are used to determine the quality of milk, or by chemical analysis.

Extracts from Correspondence.

EXTRACTS FROM CORRESPONDENCE.

In the following pages there are presented brief extracts from the correspondence of the Secretary's office. This correspondence would have been very gladly given at more length and from a larger number of persons if the space at command would permit, the material at hand being much more than sufficient to fill the whole number of pages allowed for the report.

The extracts given are, as far as possible, in the exact language of the writers, but condensed to the utmost extent and with all details of organization etc. eliminated. In these details, while they are not perhaps of interest to the general reader, there is very much of promise for the future health interests of the state. For economy of space the name of the county is omitted, and the extracts are arranged in the alphabetical order of places from which they came.

Adams Township: Our people are quite intelligent in regard to sanitary measures, except as to their drinking water. Many insist that if water is clear and has no odor, that it must be pure.

There are no special unsanitary conditions excepting that many wells, which are commonly about 30 feet deep, are too near to foul privies and stables. They are usually curbed with plank, which becomes decayed and the water in them is then unfit to drink by either man or beast, though used by both.

There has been no general outbreak of contagious dis-

Extracts from Correspondence.

eases, the few cases mentioned being widely apart and at different times.

The Health Officer has no compensation.

J. M. HARRISON, M. D., H. O.

Albion: The general health of our people is better than last year, but this cannot be placed to the credit of the Board of Health, as but little has been done by them during the year. However, we claim the credit of preventing the spread of Diphtheria by prompt quarantine, and of avoiding the introduction of Scarlet Fever which prevailed around us.

Want of means to bear expense is one difficulty in carrying out the purposes of the health laws.

C. M. KEACH, H. O.

Altoona: We have had a very healthy year. The City of Altoona is a terminal point for three railroads, and the Board of Health are constantly on the watch for cases of contagious disease, which are liable to be dropped off here, and I feel sure that the utmost endeavor will be used to "cooper" the first case that may show up.

My experience is somewhat limited, but the determination is immense.

ISAAC CROSS, H. O.

Amherst: Many cases of contagious diseases are among a class of people, which, in a majority of cases employ no medical aid, when such cases come to the knowledge of the Health Officer he takes such steps as he can to quarantine the disease, but as there is no county organization and the authority of the town Health Officer does not extend beyond his own town, he is powerless to prevent people from the neighboring towns conveying the disease and in some cases making null the efforts of the Health Officer. The above causes are the greatest obstacles to efficiency in checking disease. I would respectfully submit it as my opinion that a law should be passed forming a County Board of Health composed of all the Town Health Officers

Extracts from Correspondence.

on the same principle as the present County Boards are composed of the Chairmen of the Town Boards of Supervisors, with authority to act and compel a more rigid observance of the rules of the Boards of Health.

A. H. GUERNSEY, M. D.

Antigo: It appears that each succeeding year the Board of Health improves in regard to its efforts to limit the spread of contagious diseases and to look after the sanitary condition of the city.

A dumping ground has been purchased by the city, and all refuse matter, offal etc., is carted there where it is cremated or buried. This step has proven to be a very wise one for much of the filth which has heretofore been strewn broadcast is now properly disposed of.

J. F. DOYLE, M. D., H. O.

Arcadia: In looking over the history of the epidemics of Scarlet Fever and Diphtheria for the last twenty years I find that about every seven years we have an epidemic of one or both of them through the Trempealeau Valley.

The only way I can account for it is the high water in the spring of these years that overflows the valley, and the dry summer that follows causing the emanation of gases from sloughs and damp ground that occurs from the dry summer.

W. T. ENGLISH, M. D., H. O.

Ashland: The Board of Health hold a regular monthly meeting, and during the summer months meet every other week.

Great improvement in the sanitary condition of the city has been made.

There has been a great change in sickness and mortality for the last year which can be traced to the good work of the Board of Health and improved condition of the sewers.

The school children have been vaccinated during the winter.

The Water Works company have extended the intake

Extracts from Correspondence.

pipe 5,000 feet into the bay where the water is pure, and clean. With our system of sewerage, in time we can have every part of the city in good sanitary condition.

J. A. MARCHESSAULT, M. D., H. O.

Auburn: A case of Diphtheria occurred in our town, but was immediately recognized and placed in an upper room, cared for by a single nurse, with no cases following. Disinfection of clothing and bedding, fumigation, white-washing, etc., were carried out. Diphtheria occurred in another family, five of the children took the disease and died. One, a twelve year old son, was sent away and escaped the disease. The house was small and built of logs. The contagion was taken to the family by the father who visited a relative in an adjoining town. He was there but once and only for about two hours and did not contract the disease himself but in just five days thereafter the first case occurred in his family. Quarantine and disinfection were used and the disease did not spread beyond the family.

E. J. ORVIS, M. D., H. O.

Augusta: The Board of Health was fully organized in accordance with the law. The Health Officer receives \$20 per annum.

In cases of Diphtheria the board has furnished disinfectants where the people were unable to procure them. The sanitary condition of our town is good.

The law requiring the reporting of contagious diseases is generally observed. On the whole the work of the board has been very encouraging.

G. F. HAMILTON, M. D.

Arkansaw: The people take a lively interest in sanitary matters and are always willing to help the health department and express their appreciation of measures taken and seem to have great faith in the ability and actions of the Health Board.

Old ideas and customs seems generally to give way on explaining the relations of things in a simple way.

Extracts from Correspondence.

In some cases it seems difficult to keep friends and relatives away from infected places, and to be effective in some cases it would be necessary to keep a guard but in most cases alarm, for their own safety is sufficient.

A. C. HULIATT, M. D., H. O.

Bailey's Harbor: A Board of Health has been organized according to law and meets at the call of the health officer. There are no particular unsanitary conditions and there is never very much sickness. The past year shows a fewer number of cases and less severe. No Diphtheria or Scarlet Fever has appeared. The law which requires the reporting of Contagious Diseases is generally observed, though occasions to do so are not frequent.

J. B. RICK, M. D., H. O.

Baraboo: The best that I can say of my experience is, make them clean up and if they fail to do it then do it for them and they will soon learn that it must be done. Some new work in sewerage has been accomplished here, at a cost of about \$15,000. Have had a very small amount of sickness during the past year, 1890.

The work of the Board of Health is encouraging though we have to meet the obstacles of indolence, ignorance and negligence. I think that in the past two years we have stamped out several outbreaks of Scarlet Fever by isolation, disinfection and close observation.

CHAS. GORST, M. D., H. O.

Barron City: There has been a system of deep privy vaults which have been a source of danger. The city council has passed an ordinance requiring all vaults to be filled up but the ordinance has not hitherto been enforced.

All barnyards and places of filth have been cleaned up, all privy vaults ordered disinfected and filled up, meat markets inspected etc. A few cases of Diphtheria appeared but were kept from spreading.

CHARLES JENKS, M. D., H. O.

Extracts from Correspondence.

Bashaw: The people are woefully ignorant as to the danger of contagion but the efforts made by this office together with the experience of the past have had a noticeable effect.

Ignorance of the people in regard to sanitary matters is the chief obstacle in the work of the Health Officer.

I believe that many of the bowel complaints here are caused by decaying wood in the drinking water. All the wells are curbed with wood, and the lake from which some obtain their drinking water, contains sawdust and slabs.

L. A. WOLCOTT, M. D., H. O.

Bayfield: Special sanitary work was done during 1889 in putting in new sewers. Garbage ground was secured two miles from the City, and a general cleaning up was instituted. There was less sickness during the year than formerly.

I find that sources of disease are apt to be neglected because they are of small account to the senses of sight and smell, until some member of the family is stricken down, and then they can hardly be made to believe that their negligence can have been the cause. People often become capable of tolerating bad air, water and food, until some weaker member of the family is attacked with the poison. I seldom find the air in any cellar free from deleterious gases. Sick rooms are generally super-heated and without ventilation.

H. HANNUM, M. D., H. O.

Beaver Dam: Good sanitary surroundings and immediate quarantine of contagious diseases are the best safeguard to the public health, as is proven by the yearly decreasing mortality rate.

For suppression of Scarlet Fever, houses were placarded, and after the disease had disappeared were thoroughly disinfected.

J. U. SCHNETZLER, M. D., H. O.

Extracts from Correspondence.

Beetown: No compensation has ever been offered the Health Officer. The State Board of Health is notified and necessary precautions are taken when contagious diseases appear. The sanitary conditions are excellent.

W. P. HARTFORD, M. D., H. O.

Berlin City: Diphtheria has broken out twice during the year. In the Spring we had eleven cases with four deaths. In the summer there were nine cases with three deaths. All of these cases have been among the Polish people. Every family has been quarantined and guards kept night and day. Schools were closed and houses placarded.

C. M. WILLIS, M. D., H. O.

Blanchardville: Complaint was made to the Board, of the condition of a cheese factory in the village. The Board authorized one of its members to notify the owner, who upon this had improvements made which were satisfactory to all.

Diphtheria has been prevalent owing largely to want of cleanliness in certain localities, and to the want of roomy houses among the poorer patients.

A. McKELLAR, M. D.

Big Flats: The people as a class are willing to do as directed in the care of the sick etc., but have not been educated to the necessity for anything of a sanitary nature. The Health Officer has a compensation of \$2.50 per diem and mileage of 25 cents per mile.

W. E. McGOWAN, M. D., H. O.

Boscobel City: The Health Officer has authority from the Board of Health to act in its name. He is also city physician. The work done has been the general cleaning of alleys and streets, hog pens, privies, butcher shops, slaughter houses and places likely to become nuisances being kept clean and closely watched. Foul privies are the hardest nuisances to control, pig pens come next.

The intelligent people favor the efforts to restrict the

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spreading of contagious diseases. The ignorant are not in favor of being advertised, it shocks them. We are ready for a full fledged epidemic of Small Pox if it happens to come this way. The howlings of those who cry infection has prevented vaccination and when Small Pox comes they will see their error but too late.

L. G. & C. A. ARMSTRONG, M. D's.

Boscobel Township: The work of the Board of Health has been encouraging.

The people have learned that there is such a person as the Health Officer and often refer matters to him in cases of neglect, real or supposed, and when spoken to, try to comply with the laws. It is very seldom that the law has to be enforced by suit.

L. G. ARMSTRONG, M. D., H. O.

Brighton: There has been no epidemic. The work of the Board has been encouraging. Have encountered no trouble so far, people generally yield to warning when there is present danger, especially if it does not interfere with them pecuniarily.

There is great carelessness respecting vaccination.

J. C. BUCHAN, M. D., H. O.

Brodhead: The most constant menace to the public health is the contaminating of drinking water with septic material, mostly from privies. The soil being very sandy allows free drainage and many of the wells are but a few feet distant from this source of infection. This unsanitary condition exists only in the business portion of the village.

E. G. BENNETT, H. O.

Burke Township: The cause of an outbreak of Diphtheria in this township I attribute to unsanitary condition of premises. I found near the back door and covered over with some planks what was left of an old caved in cistern with foul water in it. The house was banked with horse manure which the attending physician thought might have been one of the causes.

J. S. COOK, H. O.

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Caledonia: Diphtheria broke out in a family where there were four cases three of which proved fatal. There were no funerals, the children were buried in the night. The premises were quarantined, disinfectants freely used and all rubbish about the place burned. There were no other cases in the town.

W. M. JENNY, M. D., H. O.

Cashton and Township of Jefferson: Our town and country are in a nearly perfect condition in regard to sanitation, being about the highest point in the state it is high and dry. Sanitary work consists in inspecting outhouses.

Have had no contagious diseases in the last year and since La Grippe has subsided has been the healthiest known for years.

E. E. GAINS, M. D., H. O.

Chase: There is much need of sanitary work on private places but if I should start such matters without some controlling influence such as an epidemic of contagious disease or orders from head quarters I would be considered as fleecing the town out of funds without cause other than a desire to have my business as Health Officer increased for the pay I could get out of it.

J. C. BANTA, M. D., H. O.

Chetek: The expense of the board has been \$60, of which \$32 was for the sick poor, and \$28 for services and expenses of the Health Officer.

There has been a change for the better in the character and amount of sickness over the preceding years, particularly in the diminution of contagious diseases.

ABEL BAILY, M. D., H. O.

Chilton: The Board has visited and carefully inspected all privy vaults, cess pools, butcher shops, and other places where disease might find origin, and the same have been disinfected and thoroughly cleansed.

There has been scarcely a case of Typhoid, Diphtheria, or Scarlet Fever during the year.

D. T. JONES, M. D., H. O.

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Chippewa Falls: The city has been very much improved in healthfulness by two large general sewers having been built the entire length of the city, successfully draining the whole city. As a consequence, there is very little water lying under the city in the old marshes on which the lower portion of the city is built.

We have water-works now conveying water two miles, which with but very few exceptions on the lower ground, are now being used by the population. The consequence is very promptly to be seen in the lessened amount of sickness, and markedly so as regards diseases due to contaminated water supply.

There were a number of privies which it was hard to oblige people to renovate, as they almost considered it an intrusion to inspect them. They were renovated, however, though not always with good feeling.

There has been a lessened amount of contagious disease.

P. H. LINDLEY, M. D., H. O.

Clifton: I think the sanitary work in this community is very encouraging, for I am quite positive that we have averted several epidemics of contagious disease by prompt quarantine, etc.

In my experience I have found our people very ready and willing to observe the laws of the Board of Health, after the object has been explained.

This work has been going on now for several years, and people are "catching on" so that we have no trouble in enforcing any ordinances that may be required.

We are now having—Sept., 1890—what seems to be a second epidemic of La Grippe.

J. S. COCKLIN, M. D., H. O.

Clinton, Rock Co., report of 1889: We find that families using water from shallow wells containing surface water experience more sickness, especially of malarial and bilious types of fever. In our rural communities, the most fre-

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quent source of contamination to the drinking water obtained from wells is the omnipresent privy. The older the village the greater the danger from this cause. The Board has to look after them with a vigilant eye. Another source of sickness is the imperfect drainage about houses, and the inadequate means of destroying kitchen garbage. More disinfectants are used than formerly, and there is a growing sense of the importance of sanitary measures.

Report of 1890: The past season has been remarkably dry, and many wells have been deepened so that good water has been generally obtained. Thereby good health has been measurably secured. Sanitary intelligence has more generally prevailed, more disinfectants have been used in privy vaults, cess pools, etc., and the people have been more alive to sanitary precautions.

We are indebted to the germ theory for arousing people to a sense of danger and a wholesome fear of the deadly microbe. The result is most beneficial, be the theory universally or only partially true.

GEO. COVERT, M. D.

Clinton, Barron Co.: Our town is sparsely settled but we have a class of people who have an eye to their surroundings and who will not tolerate anything detrimental to health, or that will be liable to bring disease of any kind among them, hence we have had no contagious diseases in the community during the past year.

ERIC PEDERSEN, H. O.

Columbus: The result of the efforts to restrict the spread of disease is encouraging, and is just as it should be, doing good generally.

R. W. EARLL, M. D., H. O.

Commonwealth: The Health Officer has power to act in case of an emergency. Frequent sanitary inspections of the city have been made and all nuisances ordered to be abated. No special unsanitary conditions exist, the chief

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obstacle of the board being the indifference of the majority of the people as regards the sanitary condition of their premises and environment. The only reliable means of overcoming the inclination for non compliance with the requests of the Health Officer is the positive enforcement of the existing statutory provisions for the same by Local Health Boards. Diphtheria made its appearance during the year 1889. In each house where the disease was found, isolation of the sick was ordered and quarantine established as far as possible. In case of death therefrom speedy and private burial of the body was directed. The State Board of Health is promptly notified of the occurrence of any contagious disease appearing. The requirements of the State Public Health Laws are complied with.

R. W. ODELL, M. D., H. O.

Cumberland City: There has been a marked diminution in Typhoid which has always prevailed here, also Scarlet Fever and Diphtheria which have been less malignant than heretofore. All cases of the latter have been strictly quarantined and particular care taken to ventilate and disinfect.

The majority of dwelling houses and hotels have been inspected, privy vaults cleaned and disinfectants freely used. Several sink-holes have been filled up, street gutters well cleaned, and three wells discontinued.

I have visited nearly every house in this city. As a rule the citizens have responded promptly to my calls and have carried out my recommendations. In a few instances I have been obliged to make the second visit but the neglect was not intentional. I have up to this time caused the cleaning of about twenty-five out-houses; closed about a dozen cellars. Wells are mostly in good condition. Have taken up about 500 loads of debris from streets and door yards, filling up one sink-hole which has been an eye-sore for several years and the receptacle of all manner of offal.

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I am greatly in hopes to make an impression on the Typhoid this coming fall by the removal of such places.

DR. W. C. PEASE, H. O.

Dartford and Town of Brooklyn: It has been my experience that the people are themselves very much interested in giving me notice of any contagious disease, as when any other physician is attending the case the neighbors always notify me as soon as they fear any one is afflicted with some contagious disease. In fact, every parent seems to consider himself in duty bound to report it.

A. Z. HOWARD, M. D., H. O.

De Pere: Thorough and repeated inspections of the city for nuisances, adoption of health ordinance covering the ground quite thoroughly, house to house canvass and taking of record as per enclosed blank form, at the same time distributing the pamphlets on "Restriction and Prevention of Contagious Diseases," as issued by the State Board of Health, have been the lines of work mainly prosecuted by the Board of Health.

A few badly drained barnyards, poorly constructed drains and sewers, and several old privy vaults constitute the unsanitary conditions now existing.

Diphtheria and contagious diseases generally have diminished. The few cases of contagious disease occurring have been dealt with strictly as to isolation, disinfection, placarding and quarantine, according to suggestions made by the State Board of Health.

A. M. KERSTEN, M. D., H. O.

Durand: General improvements have been made in the way of permanent drainage, abolition of filthy pig-pens, and endeavors have been made to remove the stockyards situated near the railway tracks or have them better drained, but this has not yet been accomplished.

The community in general are quick to perceive and adopt measures for the restriction and prevention of disease.

F. J. GOBAR, M. D., H. O.

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Eau Pleine: I have been to a great deal of trouble, where Diphtheria has prevailed among a certain class of our citizens, in endeavoring to keep the cases isolated, who, if allowed to do so, would take the body of a person having died of Diphtheria to the church among a congregation of two or three hundred, and it is hard to find out what the nature of the sickness has been. The work is discouraging among this class of people.

E. A. REDFORD, H. O.

. Elba: I think that the idea of having a Board of Health is yearly increasing in favor with our people and that they would not now wish to do without it.

Would it not be well for the State Board of Health to insist on the doing away with all vaults under privies and that all excrementations should be kept above ground having dry earth thrown upon it every day and all removed every few weeks.

J. C. BRAINARD, H. O.

Florence: The Board of Health meets when called by the Health Officer. The Board has given the Health Officer power to act in its name in case of emergency. Since Sept. 1st, 1889, there have been eighteen cases of Diphtheria, two of which proved fatal. Houses in which the disease appeared were placarded and disinfectants used. No obstacles have been encountered in the performance of my duties as Health Officer.

C. A. FORTIER, M. D. H. O.

Fond du Lac: Our city has a splendid system of water-works, water being furnished from artesian wells. It also has very good sewerage and more sewers are being put in, about \$5,000 having been expended during the last year for this purpose.

Alleys, out-houses, slaughter houses, etc., are all properly and thoroughly cleaned as often as necessary, thus altogether we have a very clean and healthful city.

H. C. DITTMER, H. O.

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Fond du Lac (Township): The sanitary condition of the surroundings, and the health of our people are most excellent. I believe this is due in a measure to the fine water we have, to the enlightenment of the people as to cleanliness and to the efforts put forth by the Board of Health and the Health Officer.

F. F. PARSONS, H. O.

Forest: The Health Officer has authority to act in the name of the Board of Health and keeps a record of all his proceedings.

JOSEPH SHAW, H. O.

Fountain City: The people here now obey willingly any mandate of the Board of Health, and feel that in so doing they are under the protection of wholesome laws.

There has been a diminution of all kinds of contagious diseases.

Our School Board has paid no attention to the matter of vaccination.

M. W. WATERMAN, M. D., H. O.

Franklin, Kewaunee Co.: The town Boards of Health of the townships of Franklin and Cooperstown take all possible measures to prevent the spread of contagious diseases, and report all cases to me that are not under my care, which are thoroughly investigated and all sanitary means used. Very few cases of Typhoid originate here, but are mostly brought here by parties returning from the lumbering camps.

F. SIMON, M. D., H. O.

Franklin, Milwaukee Co.: The cases of Diphtheria and Scarlet Fever occurring have been isolated properly, and in no case did the disease spread beyond the house in which it originated. The Health Officer receives no compensation, such duties as he has to perform the town appears to expect gratis.

T. E. MALONE, M. D., H. O.

Fox Lake Village: Board of Health meets whenever there is necessity for action, and a record of its proceedings is kept. Compensation of Health Officer, ten dollars

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per year. Inspections of premises were made and orders given for the removal of filth, manure, out-houses, etc. Such nuisances form the worst sanitary features of our village; though it probably is not worse than the majority of towns of its size, it is not up to the standard of sanitary conditions in these days.

The town has been remarkably free from all the specific diseases. In case of any real outbreak I presume there would be very little opposition to needed measures.

C. F. TYRRELL, M. D., H. O.

Grand Rapids: There has been a careful sanitary survey twice during the year, which has revealed inexcusable slackness with reference to the unsanitary condition of privy vaults; the second visit, however, found them much improved in many instances.

Diphtheria and Scarlet Fever have been much diminished in frequency and severity. In reference to the healthfulness of our city, I am more and more convinced that if all our people would exert themselves to the utmost, we would have, as the fruit of such efforts, one of the healthiest cities in the Northwest.

Referring to the pig-sty business again, a man ought to keep his premises clean for the sake of his own family, and he has a duty to his neighbor also.

The difficulty of educating people up to the necessity of keeping pig-pens in a cleanly and inoffensive condition, if kept at all, even in the byways and remote sections of the city, is very great, and they are so liable to become nuisances, even when unusual care and attention are given them, that they should not be tolerated in the thickly settled part of any city. One of the rights of a citizen is to be protected from contagious diseases and from nuisances.

G. F. WITTER, M. D., H. O.

Green Bay: The greatest achievement in sanitary work which it has taken nearly two years to complete, is the

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drafting of a plumbing and drainage ordinance, which the City Council adopted, whereby the work is all inspected and tested by an inspector appointed by this Board, and subject to removal by the Board for any improper act or for incompetency or inefficiency. His salary is fixed by the Board and his reports made at the regular meeting of the Board.

Our Public Water Supply is from artesian wells 900 feet deep.

There have been for the last year but few cases of Typhoid Fever, and those in the suburbs of the City, where surface water wells were in use. No cases have occurred where the Public Water Supply has been used.

No obstacles to the work of the Health Officer are met with, except a feeling among many citizens that the office of Health Officer was unnecessary, and more ornamental than useful, and tyrannical in that hog-pens were forbidden in a large area of the City. The foreign element are the hardest to convince of the usefulness of any sanitary measure.

B. C. BRETT, M. D., H. O.

Hale: I have been Health Officer in different towns in Wisconsin for ten years, and can say that I have found it better this year than ever before.

The people are all willing to take hold and do anything in their power to improve the sanitary conditions. I have found the work very encouraging.

W. E. PARKER, M. D., H. O.

Hammond Village: One of my observations has been that people generally are perfectly willing that their neighbors should be strictly quarantined when there is contagious disease in their families and frequently complain that it is not strict enough but when it comes within their own families they desire the quarantine to be as light as possible. Much trouble is encountered in this respect.

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The wells here are very deep, from 75 to 180 feet, hence we conclude there is no danger of contaminating them by percolation through the soil.

A notification from the secretary of the State Board of Health to Local Health boards about the beginning of May of each year ordering the streets and private premises cleaned and put in thorough sanitary condition, would have much influence in inducing communities to pay attention to these things to a greater extent than if the order originates with the local Board.

J. P. DAVIS, M. D., H. O.

Hammond Township: I find that people object to being ordered to do so and so, but are easier led than driven. Ordinances are usually disregarded, partly because they are often of no use or lack the necessary backing from the proper authority.

I am more than ever impressed that more sanitary science should be taught in the public schools and less of the ordinary physiology etc., more about healthy homes, less about alcohol and narcotics, more about the unseen and generally unknown causes of disease and less about seen and known causes which we can well afford to hear less of.

My observations about the "well and privy," for they almost invariably go together and pretty close together, are that with few exceptions it is the same old story of contaminated water supply, of course augmented by other causes such as climatic causes etc. In five cases of Typhoid, now all sick, I am positive that all are due to the privy and the barn yard.

E. L. BOOTHBY, M. D., H. O.

Harrison Township: I was appointed health officer three years ago and have acted since but have received no pay. There is no special unsanitary conditions present and have had no contagious diseases present during the year.

O. S. JONES, H. O.

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Town of Hartland: We distributed a great many pamphlets among the people and it seems to have had a good effect as most of those who received these pamphlets have been careful to observe the suggestions made in them.

S. T. IRVINE, H. O.

Háyard: (Town comprising the whole of Sawyer county.) There have been six cases of Diphtheria, none proving fatal, they occurred in two families. About 40 dollars was paid for condemned bedding etc. and for disinfecting the premises.

Quite a large sum was expended in having the streets cleaned of rubbish.

A large marsh adjoining the village has been thoroughly drained by the owners, the North Wisconsin Lumber Co. at a cost of several hundred dollars.

J. B. TROWBRIDGE, M. D., H. O.

Hillsborough: Education by means of the pamphlets sent out by the State Board of Health, and persuasion are the best means of getting the co-operation of the people in sanitary work. I think as a rule in the smaller places and country districts no sufficient remuneration is appropriated to sanitary work to enable it to be thoroughly done.

FRANCIS PINCH, M. D., H. O.

Horicon: The Board of Health meets once a month as a rule. There has been no contagious diseases during the year. The keeping of hogs in certain parts of the village has been prohibited. Opposition was met in having manure piles removed but this was overcome by notifying the parties through the City Marshal.

L. W. MENZEL, M. D., H. O.

Jamestown: The year has been remarkable for the absence of disease with the exception of La Grippe, of which about two fifths of the population were affected. No deaths are directly traceable to it.

L. A. SCHROEDER, M. D., H. O.

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Juneau: The Board of Health is constituted of three aldermen and a physician and meets the second Tuesday of each month. Its proceedings are recorded and published. There are no special unsanitary conditions existing excepting the County Jail. The only contagious diseases we have had during the year — 1889 — were two cases of Diphtheria which originated in the Jail.

W. E. HALLOCK, M. D., H. O.

Kenosha: The usual work of abating nuisances was required.

Our water supply is from artesian wells, five of which are of a depth of from 1400 to 1500 feet. There were a few isolated cases of Diphtheria and Scarlet Fever. Cards were put up warning callers, and the disease did not spread.

Records of disease are not kept as they should be.

JOHN HARRINGTON, H. O.

Kewaunee: One outbreak of Diphtheria occurred; one youth had died and another taken sick when discovered.

There was no physician in attendance on the one that died. The house was quarantined, disinfectants and fumigation were used thoroughly. Two of the three cases recovered and no further difficulty followed.

O. H. MARTIN, M. D., H. O.

La Crosse: Besides ordering all nuisances cleared away the Board has condemned a number of houses that could not be maintained in a sanitary condition.

Expenditures have been made for disinfecting private houses, cleaning alleys and out places, removing cess pools, burying dead animals, keeping privies in good condition, etc., etc.

Our slaughter houses will soon be done away with, as a large abattoir has recently been erected and will be in operation in a few weeks

The year has been remarkably healthy, a great diminution of Diphtheria has taken place. We have shut off

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communication with such houses as have Diphtheria or Scarlet Fever as much as practicable, isolated the sick and allowed no public funerals. Whooping Cough has been unusually prevalent among children and adults.

C. H. MARQUARDT, M. D., H. O.

La Fayette: I have been superintendent of the poor for the past eighteen years and have some experience. We enforce cleanliness and give special attention to the keeping of privies cleaned, and a general scrubbing out of all houses where pauperism and sickness exist. Where we find pauper sickness we always find filth.

A. H. ISHAM, H. O.

Lancaster: The regular work of inspecting private premises, etc., has been done.

The central part of the city has recently been drained into an adjoining creek.

F. E. STRONG, H. O.

Lessor: The results of the work of the Board of Health are not very noticeable as yet, but a few may have learned something.

The drought has caused many to dig their wells deeper, consequently less surface water will be drank in the future. Surface water is also being drained off much quicker in the spring than formerly.

The schools were suspended during the prevalence of Scarlet Fever and Diphtheria.

W. J. MCCOY, H. O.

Lima. A Board of Health was organized but not until after some delay caused by not feeling the necessity for such a Board. I consider the hope of the country lies in the teaching of physiology and hygiene in the schools.

J. N. MC. LEOD, H. O.

Lincoln: In the village of Amery where we had an epidemic last year of Typhoid Fever, we have had all filth carried away and also a drain dug to drain the marshes surrounding the village.

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We have a large dead water from the dam which extends back for about six miles; this affects the wells of the village so that water is reached at three or four feet from the surface.

My observations have been mostly in regard to Typhoid Fever and I believe that the number of cases could be greatly diminished if the same quarantine regulations were established as in Scarlet Fever and Diphtheria. My experience has caused me to look upon it as a contagious disease, good authority to the contrary notwithstanding.

H. A. HALLIDAY, M. D., H. O.

Lisbon: There has not been, in our village, a single case of Scarlet Fever or Diphtheria during the year but in the towns of Orange and Fountain there have been many cases of both diseases.

The chairman of the town of Orange was notified of two cases of Scarlet Fever and one of Diphtheria but did not placard the houses because a physician of good repute said they were mild cases and that Diphtheria was not contagious and could not be carried.

E. G. TOWNSEND, M. D., H. O.

Lowell: The Board of Health meets at the call of the chairman. The Health Officer has a per diem compensation of five dollars when working for the Board and has power in an emergency to act in the name of the Board.

The law requiring the reporting of contagious diseases has been well observed.

P. G. KUNTZEL, M. D., H. O.

Loyal: There has been a marked diminution of disease here, especially Scarlet Fever and Diphtheria. Isolation followed by disinfection has accomplished this end. No instance of its being conveyed to other families has occurred here in the past year.

J. A. L. BRADFORD, M. D., H. O.

Manitowoc: Cholera Infantum seldom, if ever, shows itself here before the first frost, and then in children fed on

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cow's milk. I have noticed this for the last ten years, and I find that as soon as the first frost comes, or the grasses begin to change in the fall, we have our cases of Infant Cholera from then until the cows are put on winter feed. I have taken the pains to look after the cows from whose milk the children are fed, and on inquiry the owners tell me that the cows always have a decided looseness of the bowels at this time of the year, and in my practice I find that nearly every one taken from the cow's milk and put on some other food recover very rapidly, and in most cases without much, if any, medical treatment.

J. R. CURRANS, M. D., H. O.

Maple Grove: There was an outbreak of Diphtheria numbering 24 cases, of which eight were fatal. An ordinance has been passed by the Town Board that houses infected with contagious disease shall be strictly quarantined.

My experience as Health Officer is that if one attempts to do his duty it is the easiest way of making enemies and incurring the dislike of persons most immediately affected. It is decidedly discouraging.

LOUIS FALGE, M. D., H. O.

Marinette: Regular quarterly meetings of the Board are appointed, but it is seldom that a quorum appears. However, the Board act in harmony and have given the Health Officer full authority to act in case of emergency, and he frequently consults with members of the Board individually.

A very considerable amount of sewerage is planned for and the contracts let, which will be completed before another season. Swamps and pools have been drained.

J. J. SHERMAN, M. D., H. O.

Marshfield: Of the unsanitary conditions in our town may be classed foul privies, barns, and stagnant pools along

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the public thoroughfares, conditions which cannot be removed in this community without great expense to the people.

Another source of danger is a slaughter house situated on one of the public highways and one which emits a stench that will sometimes demoralize the most robust. Whooping Cough and Typhoid Fever have been prevalent.

Dr. M. SCHMITZ, H. O.

Mayville, and town of Williamston: A Board of Health is fully organized in each place. The City Board holds regular meetings in conjunction with the regular meetings of the City Council. Its proceedings and orders being recorded.

In the city the annual salary is 35 dollars, in the town regular charges are made for services rendered. The Health Officer has full power to act in the city or town.

A. F. SCHOEN, M. D., H. O.

Menomonie: There has been fewer cases of contagious diseases than usual but except when an epidemic is prevailing people are careless and indifferent as well as in some cases ignorant. Many of our citizens do not appreciate the need of sanitary precautions and are lacking in the necessary element to properly care for their sick, either from want of knowledge or want of means and facilities, though I have found them willing to do all that is asked of them as far as they understand and are able to comply with the requirements.

D. H. DECKER, H. O.

Menomonie: There has been about the same amount of ordinary sickness, with marked diminution of Diphtheria and Scarlet Fever. About \$1,000.00 has been expended in the interests of Public Health principally on account of the Small Pox scare in 1889 when there were five cases, none proving fatal. Places where contagious disease has occurred have been thoroughly disinfected, and notices were served to those whose premises were considered detrimental to health.

K. KELSEY, M. D., H. O.

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Merrillan: We have a regularly organized Board of Health which meets once a month. Certain sidewalks were temporarily removed that water which was contaminating the air might be properly drained off, yet there is drainage still needed in some parts of the town. Upon the appearance of Diphtheria or other contagious disease, the Health Officer investigates the case, placards the house, and one or more members of the Board give instructions to those in charge. The results have generally been encouraging.

I believe the people generally are becoming more desirous of sanitary improvement.

J. B. McMILLAN, M. D., H. O.

Merton: Convenience rather than safety seems to be the end sought by many farmers and others in digging their wells, if we may judge from their location. I would suggest that the State Board of Health send out pamphlets bearing on this subject to all farmers, school trustees, etc. It is true that many who have wells will not dig new ones, trusting rather to luck that the water which they drink will not be contaminated by leakage from cattle, horses, etc., but it would be a means of instructing others, who have not wells yet dug or who may contemplate digging others.

B. L. CAMPBELL, M. D., H. O.

Mineral Point: Cases of Scarlet Fever and Diphtheria have been isolated and quarantined; only two fatal cases. No special obstacles to our work but had to enforce the cleaning of certain privies.

W. EASTMAN, H. O.

Montford: As a rule when notified to clean and disinfect foul privies, barn-yards, etc., the people have done so promptly and without the necessity on my part of reporting them to the Board. We have been exceptionally free in this locality from visitations of infectious or contagious diseases. Have had no cases of Diphtheria or Scarlet Fever here for over two years.

W. H. VAN DUSEN, M. D., H. O.

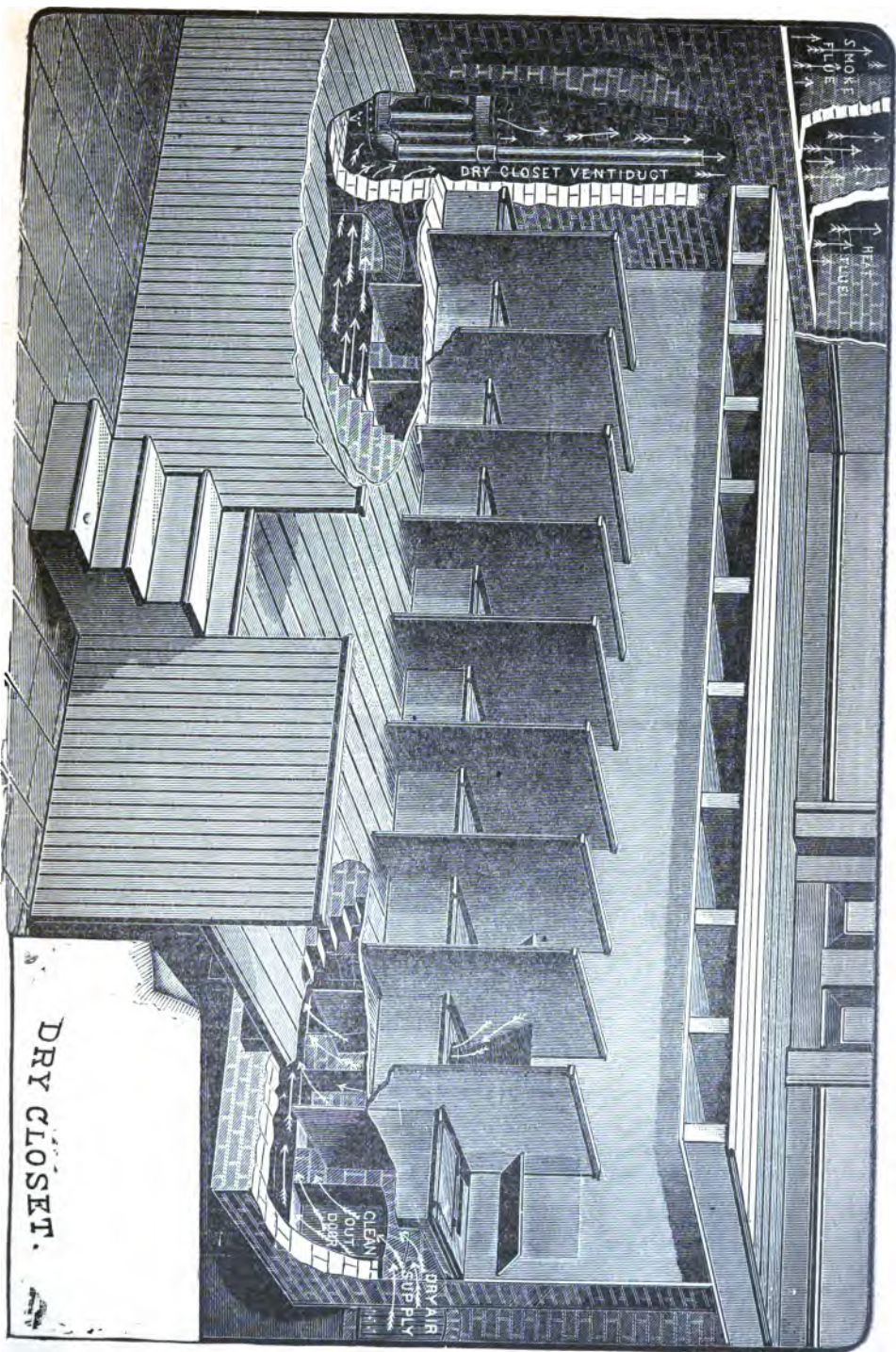


Fig. 2.

DRY CLOSET.

Extracts from Correspondence.

Moscow: By far the most important disease which we have had to deal with was Diphtheria which made its appearance during the spring and summer months. The origin of the disease is unknown and nearly four months passed between the occurrence of the first case and the second in another family. That the disease thence got a good start was no doubt due to the fact that the boy affected was running at large and even attending school for sometime before he came under my observation. Several cases followed this, some terminating fatally. I think that if the people were better acquainted with some of the peculiar features of Diphtheria frequently met with, to-wit, its insidious approach and the occasional insignificant local affection in cases which nevertheless frequently terminate fatally there would be less danger of the people resting in the belief that they were merely laboring under the effects of a cold, thus losing valuable time for proper treatment.

Far more probably would have been accomplished if the public were more enlightened upon matters pertaining to Physiology, Hygiene and the character and management of contagious diseases.

S. JOHNSON, M. D., H. O.

Nepeuskin: I believe that the requirements of the law with reference to reporting contagious diseases is very generally observed in this town. When reports of this kind are received the Health Officer immediately investigates the case and if necessary imposes strict quarantine. The general results of these measures taken for restriction has been very good. Our water supply is from wells varying in depth from 20 to 80 sometimes 90 feet, the water is generally good.

J. M. DAVIS, H. O.

New Haven: The circulating of the reports of the State Board of Health has made every one wide awake to their duty, consequently everything has been in good order.

JOHN RUSSELL, H. O.

9—B. H.

Extracts from Correspondence.

New Lisbon: The authorities of this city and physicians are quick to realize the importance of immediate action to suppress contagious diseases. They not only sustain the Board of Health in their efforts, but urge promptness and precaution. Our streets are kept clean and free from rubbish, garbage or obstructions and sources of filth are watched.

ELIAS BOYNTON, H. O.

New London: Since we have water from flowing wells in the city, the general health has been most exceptionably good. There has been a marked decrease in the number of cases of Dysentery, Diarrhoea, and continued fevers; in fact, we have no cases of Typhoid unless brought here from some other place, and that has not occurred in the past year, not a single case of Scarlet Fever for the past two years. This speaks well for the sanitary condition of our city, which years back has been annually visited by some of the most terrible scourges of Diphtheria and Scarlet Fever. The organization of a Board of Health has been a blessing, as well as the pure water.

H. K. JILLSON, H. O.

Oak Grove: Board meets once a month, and oftener if called together by the Health Officer. The Health Officer has power to act in the name of the Board in an emergency. Very little sickness has occurred during the last year.

W. E. HALLOCK, M. D., H. O.

Omro: I find a general indifference existing in regard to the sanitary condition of privies, back yards, cellars, barns, etc., and much difficulty in enforcing necessary reforms. No epidemic disease has visited the village for six or seven years, and no attention has been paid to sanitary work in the past, which makes it exceedingly difficult to convince citizens that filth exists, unless their own olefactors proclaim it.

J. FRANK FORD, M. D., H. O.

Extracts from Correspondence.

Onalaska City: My experience as Health Officer although not extensive has proven conclusively to me that while local Boards of Health may not be perfectly successful in preventing the occurrence and spread of contagious diseases they are doing good work and are approaching nearer to their desired object as communities realize more and more their usefulness.

W. A. LESTER, M. D., H. O.

Oregon: We have had very little contagious disease during the past year, 1889. Quarantine by placarding the house and isolation of the patient were the means used to prevent its spread.

I think that lack of special knowledge in the matter of sanitary management is the principal cause of trouble. This must be met by educating the people. I would suggest that perhaps the best method of accomplishing this would be for the local physician or Health Officer to cause to be published over his name, a series of articles on such subjects as the locality in which he resides seems to require, giving knowledge of what needs to be done, and how best to do it. These articles can best be brought to the people by being published in the local paper if there is one.

F. R. SALISBURY, M. D., H. O.

Oshkosh: Our Board meets upon the call of the chairman or Health Officer. The Health Officer has been empowered by the board to take any steps he may deem necessary for the sanitary improvement of the city and the support of the Board is pledged to him in such undertaking.

During the year slaughter houses have been removed outside of the city limits. A general war upon foul privy vaults has been carried on, hundreds of which have been cleaned.

Cannot say as to whether there has been any change in the amount of sickness as we are too economical to maintain any method of securing vital statistics.

Extracts from Correspondence.

The privy vault problem seems to be the question of the hour. For many years the kind hearted and generous people of the city have been preserving their excrement for the benefit of future generations; they have not suffered it to be washed away into the bosom of the lake and diluted to annihilation nor have they permitted the destroying agencies of the atmosphere to rob it of its precious virulence nor yet have they allowed it to be returned to mother earth and rendered harmless by the formation of new and kindly compounds, but have boxed it up and cherished it with watchful care in all its pristine deadliness. All attempts to show the folly and danger of such action have been in the past as they are in the present, practically fruitless. Public education in this direction is sadly needed and it will take a world of it to loosen the tenacious grip with which this ancient custom has attached itself to the people. An experience of a year and a half has afforded ample evidence that sanitary work is the crab of modern civilization, of very slow progress and with a strong tendency to travel backwards.

Too many of our otherwise intelligent citizens, firmly wedded to the unwholesome customs of their ancestors, look upon a Health Officer as a ruthless if not senseless iconoclast. Their blindness to the plainest evidence and indifference to unanswerable argument are absolutely inexplicable. Not only that but the attempted enforcement of sanitary laws dwarfs the man and develops the mule nature to an extent that is really astonishing. The most determined opposition often comes from sources whence would naturally be expected the heartiest co-operation, and the strong arm of the law is the only refuge. On the whole the reception accorded the well meant efforts is chilling to ambition and a damper to enthusiasm.

HARVEY DALE, M. D., H. O.

Otsego: 1889. The most dangerous source of disease in our community is the close proximity of some of the wells

Extracts from Correspondence.

to foul privies and barn-yards. If the wells, even a few of them, ever do become contaminated the results will be fearful, so many are drawing water from the same wells.

E. M. McDONALD, H. O.

Otsego: 1890. I think that about two thirds of our people suffered from La Grippe, there having been three deaths therefrom. The people see the effect of a Board of Health and feel safer.

Dr. W. A. PEASE, H. O.

Otter Creek: Last year a good deal of sanitary work was done and its good effect is plain to be seen. I have no difficulty in getting the people to do as I want them to do. They are almost all Norwegians. I have distributed among them the circulars and pamphlets received from the State Board of Health.

GILBERT H. SNYDER, M. D., H. O.

Paris: The people are getting better houses to live in, more care being taken to build the rooms higher and better ventilated.

Cellars and dwellings are kept cleaner than they used to be.

I think the people understand and are better read in regard to health than they were some time ago.

HERMAN SWANTZ.

Pelican: There has been a great decrease in sickness the past year over previous years. Cleanliness has been to my mind the most effective means in keeping out fevers which were very prevalent last year and quite fatal. Have met no obstacle except tardiness.

L. TUTTLE, H. O.

Peshtigo: My experience as Health Officer has been that the majority of people consider that I am meddling with something that is none of my business.

The bulk of the people do not believe in the contagiousness of disease.

Extracts from Correspondence.

I believe that a course relating to such matters ought to be taught in the public schools, including the methods of contagion, and the means necessary for prevention.

N. I. TIBBITS, M. D., H. O.

Platteville City: The Board of Health legally organized immediately after the spring election. It meets regularly the first Saturday in each month, and its proceedings are recorded.

The Board has, by resolution, given the Health Officer authority to act in all cases of emergency.

There has been no demand for special sanitary work, other than the abatement of nuisances arising from privies and pig pens.

The general cleanings are left in heaps upon the streets, and are removed by order of the city council. There are no special unsanitary conditions existing except privy vaults. We are getting rid of the vaults slowly.

The amount of sickness during the last year has been less than usual. It is evident that the work of the Board has prompted individual physicians to isolate cases of contagious disease, and this is encouraging.

Our Board of Health feel much encouraged by the apparent sanitary improvement of the city since we have had a legally organized Board.

E. J. BUCK, M. D., H. O.

Platteville: The people seem to appreciate fully the relation which a neighbor's cess pool and privy has to the public health, and this I find to be encouraging. The reciprocity manifest in the complaints of a neighborhood is sure to result in improved sanitation. A complains of B's cess pool, B complains of A's privy, and the Health Board abates both.

E. J. BUCK, M. D., H. O.

Port Washington: Certain ordinances of the city relative to nuisances were printed, together with methods of disin-

Extracts from Correspondence.

fecting, and distributed to each house in the city with a quantity of lime and copperas to be used as directed in the circular.

FRED L. MORGAN, H. O.

Poynette: The principal obstacle to the work of the Board of Health has been a disposition, chiefly among the American born population, to do as they have a mind to about sanitary matters. So far only moral suasion has been used. A vigorous enforcement of the law in a few cases would cause a more general respect for the mandates of the Health Board.

Dr. L. A. SQUIRE, H. O.

Prairie du Sac: The work of the Board of Health has always been encouraging.

Our village is situated on the high banks of the Wisconsin river and excels any city in the state in point of cleanliness.

J. W. BUEHLER, M. D., H. O.

Prescott: During the time I have been Health Officer I have succeeded in promptly arresting what judging from previous experiences might have proven general epidemics. Once Scarlet Fever and once Malignant Diphtheria made their appearance, which, had they become epidemic, there would probably have been much loss of life. This is of itself quite sufficient to justify all that has been done in the way of Health Laws.

ARTHUR YOUNG, M. D., H. O.

Richland Center (City): During the year the city has put in a good water supply from which pure water is distributed to most all parts of the city.

I find that the people are getting better acquainted with sanitary laws and are favoring a strict compliance with them. All orders given are obeyed with alacrity and good feeling.

M. LOVERING, M. D., H. O.

Extracts from Correspondence.

Richland Center: The Board of Health as soon as organized passed a resolution to inspect every house, barn, well and pig-pen in the city and to enforce a general clearing up of premises where needed, and instructed the Health Officer to continue to have the same kept in good sanitary condition, which has been done as fully as circumstances would permit. There is a system of water-works in the city and the Board of Health petitioned the City Council to have four hydrants put up in the main part of the city and kept running for drinking purposes which was granted, said water coming from artesian wells and is far purer than that from the shallow wells of our city.

M. W. HASKELL, M. D., H. O.

Rock Elm: The result of sanitary work in our town is encouraging. I find no trouble in this community in discharging my duties as Health Officer, owing, I think, to the fact that we have distributed pamphlets, reports, etc., to our best citizens during the last five years with the request to read and assist us in carrying out the measures recommended and in posting others on the subject.

J. A. CLOUGH, M. D., H. O.

Salem: Work has been encouraging. Some increase of Diphtheria of a malignant type. Some Scarlet Fever of a mild form with no deaths, but five cases of Diphtheria were fatal. Twenty-five dollars has been expended principally in disinfection.

H. C. DARBY, M. D., H. O.

Saxeville: I am inclined to think that the Health Officer arrangement is a good thing if the Health Officer does not become too officious. I have had occasion to call the attention of residents to nuisances which upon my suggestion were gotten rid of without further trouble and with no expense to the town. We have been favored in the exemption of contagious diseases.

H. C. VANARSDALE, M. D., H. O.

Extracts from Correspondence.

Schleisingerville: Owing to strenuous efforts in the time of danger, and to enlightening the inhabitants regarding the benefits of sanitary precautions, which are now appreciated more than formerly, my experience as Health Officer is that it is not now as disagreeable as formerly. The work is encouraging.

M. ROSENHEIMER, M. D., H. O.

Sheridan: The Board of Health was organized in accordance with the law. The Health Officer receives two dollars per diem for services rendered. Low, marshy land seems to be the chief unsanitary condition. Efforts to restrict the spread of contagious diseases have been successful except in Diphtheria, of which we have had an epidemic. This disease spread in spite of all we could do. There were 22 cases, 8 fatal, but none are sick with the disease at present. Have encountered a few obstacles in performing my duty. One hundred and thirty-five dollars were spent in caring for the sick and burying those dying of Diphtheria.

E. PESCH, H. O.

Sheboygan City: The Board of Health has vested all its authority in the Health Officer. Numerous nuisances have been abated, such as collections of manure, decaying vegetables and other filth. Privies located near the well have been ordered to be moved. A few lots containing stagnant water have been filled.

The law requiring the reporting of contagious diseases has been very generally complied with, and placards are at once posted. There has been less of Scarlet fever and Diphtheria than in former years.

In my opinion too much stress cannot be laid upon the importance of instructing the people in regard to drinking water. Almost every case of Typhoid Fever occurring in this city could be directly and clearly traced to the use of water unfit for drinking purposes. I invariably urge the use of water furnished by the Waterworks Co., procured

Extracts from Correspondence.

from Lake Michigan at a point considerable distance from the shore.

H. RINEKING, M. D., H. O.

Shullsburg: Ignorant people always object to digging new privy vaults, cleaning their yards, hog-pens, etc., but such men are usually reached by a little tact, with a hint that the law can be easily applied. There is one sanitary matter of great importance that the Board of Health could do much with, and that is the ventilation of our school-houses. I do not know of a single one in the county that is properly ventilated, nor do the teachers as a rule have the slightest idea of how to ventilate a room if the air becomes a little foul; they pull down the windows at the top and let out all the heat there is in the room. I think the lack of knowing a few points in ventilation on the part of school teachers, causes lots of grief and many a fat fee for the doctor. The same could be said of churches, court houses, jails and other public buildings. I believe that a teacher should undergo a most thorough examination on sanitary matters. My child's health is of more importance to me than a brilliant education.

C. C. GRATIOT, M. D., H. O.

Spring Grove: I have met no special obstacles in my work as Health Officer unless it be the tardiness of some of our citizens to bury or burn the carcasses of dead animals before they become offensive to some of their neighbors. In my opinion a state law should be made requiring every person owning or having possession of or care of any animal which may die while in their possession or on their premises, to bury, or burn, or caused to be buried or burned, the same within 24 hours. In case of failure to do so the Board of Health or either of them may cause it to be buried or burned and the expense of such disposal of the carcass be placed on the next tax roll of the town against the person liable to bury or burn the carcass.

E. R. ALLEN, H. O.

Extracts from Correspondence.

Spring Prairie: I feel very much interested in sanitary work and think that the laws ought to be more generally enforced. Their benefit was clearly demonstrated here last winter and spring: Although the laws were not strictly enforced yet they were more so than in our neighboring towns and while Diphtheria and Scarlet Fever were raging all around us we had but a few isolated cases none of which were fatal.

J. H. BOWEN, M. D., H. O.

Town of Stanton: We have had no contagion or epidemic of any kind here within the past year although it has been all around us in various forms, and we think that this place is in an extra fine sanitary condition. There has been but little sickness of any kind but we doctors have had to go to neighboring towns to treat their sick, Diphtheria etc., but we have had absolutely none. In requiring parties to keep their premises clean, some have growled a little and thought the Board "fussy" but have complied without trouble.

DR. S. E. AKERS, H. O.

Sumpter: The law requiring the reporting of contagious diseases is generally observed with the exception of our old doctors who seem to think that it is below their dignity.

I think that some general law or provision empowering and requiring our smaller villages and rural districts to remunerate Health Officers should be passed that it may not be compulsory "labor of love" as often as it is now.

J. V. SPERENS, M. D., H. O.

Taycheedah: There was but one case of contagious disease in the town during the year, and that was brought from outside. By proper isolation it was prevented from spreading.

Just how all our people would feel about having the law enforced in case of contagious disease I do not know, possibly some might feel grieved at being quarantined but our

Extracts from Correspondence.

Board of Health would comply with the law protecting public health.

DANIEL O'ROURKE, H. O.

Tiffany: A Board of Health has been fully organized and has met five times on the appearance of Diphtheria. The Health Officer is paid \$2.00 to \$2.50 per day. There has been more Diphtheria here than in previous years. The greatest difficulty the Health Officer finds is to make the people in whose family Diphtheria appears understand what they ought to do. They seem to think that as soon as the disease appears in their families that the Health Officer ought to foot all the bills. The expenses of the Board during the year have been about \$40.

I believe that the most of the trouble in the discharge of the duties of the Health Officer arises from the want of proper language made use of on the part of that officer.

JONATHAN STODDARD, H. O.

Tomah: The Health Officer has authority to act in an emergency, and to recommend and enforce any measure that may be for the benefit of the public health.

There has been a marked change in the amount of sickness during the past two years, a decided decrease due, in my opinion, to the improved sanitary condition of the city.

The general result is encouraging, but occasionally we meet with some discouragements.

C. E. QUIGG, M. D., H. O.

Trenton: The Board of Health has not, by any recorded resolution, given the Health Officer power to act in its name in emergencies, and he feels as though he had a hook in his nose whenever he undertakes to exercise any such power.

The Board has, however, sustained him in all of his acts, and has been active in meeting all cases that have come up, by ordering notices posted, circulars distributed, talking

Extracts from Correspondence.

with neighbors, calling their attention to the laws of health, etc.

I believe that all classes are beginning to see the necessity of being more careful in every respect. They don't look upon the Health Officer so much as trying to trample their rights under foot as they used to do.

S. A. PORTER, H. O.

Two Rivers: I have had some difficulty about placarding houses within the last five years. Most of the opposition has been given up. Very many people do not call a doctor, but as soon as a physician is called in case of contagious disease, they expect to have a sign out.

One great source of danger in the event of contagious disease is in not requiring burial permits for public funerals, and for bodies brought from outside for interment here. People are very sensitive about having their houses placarded, or about being refused public burial from the churches.

J. R. CURRENS, M. D., H. O.

Vermont: This is a hilly, mountainous country, well watered, and hence the natural sanitary conditions are good, but the sanitary condition of some private premises is bad, and an epidemic of any serious contagious disease would be apt to prove serious. Notwithstanding this, there has been, as far as I know, nothing of the kind during the last year.

J. W. KESTER, M. D., H. O.

Verona: A slaughter house was removed beyond the limits of the village this year. No cases of contagious diseases appeared in our town during the year. The law requiring the reporting of contagious disease is complied with. The chief obstacle in our work is the neglect of out-houses, pig-pens etc., many being unwilling to admit of there being any danger from them.

C. K. JAYNE, M. D., H. O.

Viroqua: Nine cases of Typhoid fever were reported in July and August, five in one family. The physician search-

Extracts from Correspondence.

ed carefully for the causes and attributed it to the water used from a well 180 feet deep, surrounded by extensive cattle and hog yards. Two other cases used deep well water. These waters stood the tests poorly. I believe crevices leading into such wells from barn yards are not infrequent and that we must watch carefully or the water even from deep wells will be sometimes impure.

C. V. PORTER, M. D., H. O.

Washburn: This town is a new one, only six or seven years old, and no other system of drainage has been adopted than the natural one of ravines leading to the bay. When a system of proper sewerage is adopted I think there will be less of Typhoid and other diseases of a malarial character.

Dumping grounds for garbage &c. have been established and rules have been posted in all hotels, meat markets, and other public places. Most difficulty is met with in getting people to clean their back yards, privies, alleys &c.

WM. C. COBURN, M. D., H. O.

Watertown: The Board of Health give the Health Officer full power to act in case of an emergency. The Board of Education has made a move in the right direction by having put a system of ventilation and also sanitary dry closets into the High Schools.

Watertown contemplates having general sewerage and waterworks the coming year. The former is greatly needed here, the lay of the land being such that a good dry cellar is a rare thing.

I have found that by sending printed notices to those persons against whom complaint has been made, that they respond more readily than by talking to them about it. In rare cases I have been obliged to send officers to enforce orders.

F. J. WERNER, M. D., H. O.

Extracts from Correspondence.

Whitewater: I have not encountered any special obstacles in the performance of my duties as Health Officer. There has been some kicking but on the whole I have enjoyed the work.

The best means are to keep cool when others are hot, and tell them what they must do and see that they do it. The best class do the most kicking as they think they are always right and do not want to have anyone meddle with them.

We have a public water supply, the water being taken from an artesian well 1,000 feet deep and is of an excellent quality.

M. J. BAGLEY, M. D., H. O.

Wonewoc: An epidemic of Scarlet Fever here in 1889 was due to the carelessness of some citizens of a town adjoining us. The last two cases were caused by visits from a family just recovered from Scarlet Fever who came to see relatives here bringing the contagion in their clothing.

THOS. GILLULY, M. D., H. O.

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